

Delaware and Hudson Canal Company Breakers



Powderly Colliery, Carbondale, Pa. Post card in the collection of the Carbondale D&H Transportation Museum

S. Robert Powell, Ph.D.

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In Memoriam

This volume, *Breakers*, is dedicated to the memory of **John Owens** and **Henry Welsh**.

On Tuesday, March 9, 1875, Henry Welsh got caught in a coal screen at the Mount Pleasant Colliery, Hyde Park, and was crushed to death. One of Welsh's companions, John Owens, in trying to extricate Henry Welsh from the screen, was also killed. As the *Carbondale Advance* noted in its report on these tragic deaths, Owens' act of heroism furnishes "an example of heroism and self sacrifice seldom heard of, and entitling his name to be handed down to remotest posterity." Here is the report on these deaths from the *Carbondale Advance* of March 13, 1875:

"A boy named Henry Welsh got caught in a coal screen at Mt. Pleasant colliery, Hyde Park, on Tuesday afternoon, and was crushed to death. A lad about thirteen years of age, named John Owens, in trying to extricate his companion, was also killed, furnishing an example of heroism and self-sacrifice seldom heard of, and entitling his name to be handed down to remotest posterity." (*Carbondale Advance*, March 13, 1875, p. 3)

Here is a post card photograph of the Mount Pleasant Breaker, wherein Henry Welsh and John Owens lost their lives on March 9, 1875.



"Scranton, Pa., Mt. Pleasant Breaker"

A History of the
Delaware and Hudson Canal Company
in 24 Volumes

S. Robert Powell, Ph.D., 1974
Indiana University, Bloomington, IN

I	Gravity Railroad: 1829 Configuration
II	Gravity Railroad: 1845 Configuration
III	Gravity Railroad: 1859 Configuration
IV	Gravity Railroad: 1868 Configuration
V	Gravity Railroad: 1899 Configuration
VI	Waterpower on the Gravity Railroad
VII	Working Horses and Mules on the Gravity Railroad
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IX	Farview Park
X	The Steam Line from Carbondale to Scranton (the Valley Road)
XI	The Jefferson Branch of the Erie Railroad (Carbondale to Lanesboro)
XII	Reaching Out: D&H Steam Lines beyond the Lackawanna Valley
XIII	Troubled Times—the 1870s
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Acknowledgements

The 24 volumes in this series could not have been written without thirty five years of enthusiastic support and guidance from John V. Buberniak, who shares the present author's interest in (1) the history of the Delaware and Hudson Canal Company's Gravity Railroad and Canal in the nineteenth century, and (2) the history of the Delaware and Hudson Company and its rail lines in the nineteenth, twentieth, and twenty-first centuries.

It is with great pleasure, therefore, that I here (1) acknowledge the crucial role that John V. Buberniak has played in the writing of these books on the D&H, and (2) express my thanks to him for all that he has done to make these books possible.

Another Gravity Railroad historian and D&H historian to whom sincere thanks are due is the late W. E. Anderson, who was Assistant Engineer for the Delaware and Hudson Canal Company and Chief Engineer of the Delaware and Hudson Company for many years.

In 1895, W. E. Anderson brought into existence a map volume titled:

*Delaware and Hudson Canal Company.
Gravity Railroad / Carbondale to Honesdale, 1895.*

In March 1901, W. E. Anderson created a map volume titled:

*Delaware & Hudson Company's Railroad, Honesdale Branch,
Carbondale to Honesdale. March 1901.*

Using those two map volumes, the former in the archives of the Lackawanna Historical Society, Scranton, and the latter in the archives of the Carbondale D&H Transportation Museum, we have been able to identify and describe the five separate configurations (1829, 1845, 1859, 1868, and 1899) of the D&H rail line from Carbondale to Honesdale in the nineteenth and twentieth centuries.

And so, we continue our journey of learning about the D&H, focusing in the present volume on the D&H breakers. We do so, not as a master, rather as a student, and knowing that as we move forward we will make things happen.

S. Robert Powell
Carbondale, PA
May 1, 2017

Overview

The industrial revolution in America was born on October 9, 1829, in Carbondale, PA, when the first cut of Delaware & Hudson Gravity Railroad coal cars, loaded with mass produced anthracite coal, headed up Plane No. 1 out of Carbondale for Honesdale and to market in New York City.

Those cars, filled with anthracite coal from mines in Carbondale, traveled over 16 miles of railroad tracks, made up of eight inclined planes and three levels, to Honesdale, where the coal was transferred into canal boats and hauled 108 miles, through the D&H Canal, to the Hudson River.

Most of the coal that was sent through the D&H system in the course of the nineteenth century was shipped south on the Hudson River to the New York metropolitan market and to many ports on the Atlantic seaboard, north and south of New York. A large quantity of anthracite coal was also shipped up the Hudson River to Albany, and shipped through the Erie Canal to the American Midwest.

The mining, manufacturing, and transportation system that became operational on that day between the anthracite mines of the Lackawanna Valley and the retail markets for that coal on the eastern seaboard and in the American Midwest was the product of enlightened entrepreneurial, technological, and managerial thought on the part of the officers, managers, directors, and employees of the Delaware and Hudson Canal Company. That system, the first private sector million-dollar enterprise in American history, was, at the same time, the pioneer expression on this continent of mass production, a mode of production that would thereafter characterize industry in America and around the world.

Mass production, the revolutionary engine that made it possible for the D&H to launch its mining, manufacturing, and transportation system in Carbondale on October 9, 1829, and to perpetuate that system well into the 20th century, came into existence when it did and lasted for as long as it did because a body of employees

and managers, within the context of a community, of which both groups were a part, chose to work together for their mutual benefit and enrichment, to mass produce and market a commodity, and in so doing to implement the clearly articulated production and marketing objectives of “the company,” the Delaware and Hudson Canal Company.

In this 24-volume work on the D&H,* we will (1) document the history of that mining, manufacturing, and transportation system, with a special focus on the rail lines of the Delaware and Hudson Canal Company in northeastern Pennsylvania, from the opening of the D&H Gravity Railroad in 1829 to the anthracite coal strike of 1902; and (2) demonstrate that the history of that mining, manufacturing, and transportation system, the D. & H. C. Co., from 1829 to 1902, is, at the same time, not only an illustration of eight decades of fine tuning by the D&H of their mass production procedures and techniques but also a full-bodied expression and record, both from the point of view of the D&H and from the point of view of its employees, of the birth, development, and first maturity of the industrial revolution in America.

This is a success story, directed by America’s pioneer urban capitalists, and implemented by them and the tens of thousands of men, women, and children who emigrated from Europe to the coal fields of northeastern Pennsylvania in the nineteenth century to work for and with the D&H and to start their lives over again. This is a success story that is important not only within in the context of local, state, and regional history but also within the context of American history. It is a compelling story.

*The present volume focuses on *Breakers*. Each of these 24 volumes will focus on one aspect of the history of the Delaware and Hudson railroad, from the opening of the Gravity Railroad in 1829 to the anthracite coal strike of 1902. Each volume will be an autonomous entity and published separately.

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Breakers and Collieries

We will begin with some definitions.

A collier is a coal miner. “The word *collier*, as applied to the individual operator, is as common in the coal regions as the word—*miner*.” (*J. A. Clark*, p. 102)

A *colliery* is the entire physical plant (mines, buildings, machinery) where coal is mined, removed from the ground, cleaned, separated by size, and placed in rail cars or trucks to be transported to different markets. A colliery can range in size from a small operation—one mine with only the requisite supporting needs—to an enormous, sprawling plant consisting of miles of rail, huge breakers and power stations with dozens of ancillary buildings, and on-site housing for the miners and their families. A colliery can be as large as a town; indeed, many towns exist only because of the presence of a single colliery.

In 1909, a mine without a breaker was not classified as a colliery.

A *breaker* is a coal processing facility that is located at a colliery. J. A. Clark defines a breaker as follows:

“... a singular feature of the colliery establishments is the immense and costly structures known as *Breakers*. These are generally masses of heavy frame-work of great elevation and strength, and are used for the fourfold purpose of breaking, selecting, separating, and storing the prepared coal.” (*J. A. Clark*, p. 105)

Virtually all of the breakers in the anthracite coal fields had whistles which, like the bells in the churches in the coal fields, were used to convey messages to the colliers and their families. “At six in the morning and at six at night,” said Jack Gillen, Carbondale, on November 13, 2010, “they blew the whistles at the breakers. The whistle six times meant that the breakers were working and that there would be work. If the whistle blew twice, it meant that there would not be work.”

Breakers, which grew in size from their invention in the 1840s to their maturity in the mid-twentieth century, were a feature of the anthracite coal fields of northeastern Pennsylvania until the middle of the twentieth century. The increasing size and complexity of the breaker resulted in increased costs. In the 1850s and 1860s breakers cost \$40,000 to \$50,000, approximately one-third of the capital investment required to open a mine.

D&H Coal before There Were D&H Breakers (before 1858)

Before there were breakers, coal plus any impurities with the coal as brought from the mines was spread out on iron platforms. Rock and bony coal were swept aside, and the coal then pushed over iron screens perforated, section by section, with square holes of different sizes to sort the coal that fell into bins below.

“Up to 1858,” says *Clark*, p. 216, “all the coal taken out at Carbondale was upon platform cars, three boxes on each, holding respectively five hundred pounds, which were dumped by hand power, two men doing the work. The coal was then transported to Honesdale, where it was run over grate bars, which was the only means of assorting it. The first breaker erected to break the coal for market was the one above the city [Carbondale], on the mountain [Racket Brook Breaker], commencing work about 1858-9.”

Clark’s understanding seems correct: the coal was run over grate bars at Honesdale before being loaded into canal boats.

As such, the coal that was shipped from Honesdale from 1829 to 1858/59 was largely “lump” coal.

Before 1857, says *Lowenthal*, “most breaking of coal was apparently done at Waymart.”:

“. . . whatever breaking of coal took place up to that time was performed by manual labor. Prior to 1857 most of this was apparently done at Waymart, on the railway*. . . . Steam-powered coal breakers, which eventually gave the anthracite districts a distinctive and ominous appearance, originated in the Schuylkill field in the 1840s.”(*Lowenthal*, p. 193)

* What is Lowenthal’s source of this statement about breaking coal at Waymart. We have never seen any textual or photographic data or archaeological evidence to support Lowenthal’s assertion about the breaking of coal at Waymart.

First Breaker

Joseph Battin, a supervisor at a coal gas manufacturing plant in Philadelphia, invented the coal breaker in 1843. It consisted of two cast iron rollers, one with teeth and one with holes to accept

the teeth. The teeth in one roller were placed in such a way that when it revolved the teeth would fit into the empty spaces between the teeth in the other roller. The two rollers moved in opposite directions.

The rollers were not the most important parts in Battin's idea; what he wanted was a machine to break and screen coal at the same time. Therefore, on the top of the rollers he built a hopper for the coal to pass from the rollers to a long screen hung in an inclined position. The screen had a mesh which was fine toward the front and became progressively less so toward the end. Larger chunks of coal, falling inside the cylinder as it rotated, broke up and eventually passed through the screen. Impurities, which were heavier, tended to exit the breaker at the end of the screen. The sorted coal would then be collected in bins below the screen, and transported to market.

On September 11, 1843, Battin filed an application for a patent of his invention with the Patent Commissioner in Washington, D. C. Almost a month later, on October 6, 1843, he obtained the first patent ever issued in this country for a 'coalbreaking machine.' It was U. S. Patent No. 3292.

A fellow Pennsylvanian, Gideon Bast, licensed the technology from Battin, and erected the first commercial coal breaker at his Wolf Creek Colliery in the Broad Mountain tract, near Minersville, in Schuylkill County, Pennsylvania, on February 28, 1844.

In Edward Pinkowski's excellent article (*Pennsylvania Magazine of History and Biography*, Volume 73, issue 3, July 1949, "Joseph Battin Father of the Coal Breaker," pp. 337-348), we read:

"Battin's first big chance to show the usefulness of the coal breaker came when Gideon Bast, one of the most indefatigable and successful pioneers in the corps of coal operators, asked him to set up the coal breaker at his colliery on Wolf Creek, north of Minersville. Gideon Bast, who was the first to apply steam power to mining, wanted to reduce the labor of preparing marketable coal, and by April, 1844, the Battin coal breaker was in operation at his place. The new breaker, run with a ten horse-power steam engine, saved him the labor of at least sixty men. From then on, more than 200 tons of coal a day were hauled away from Wolf Creek Colliery." (p. 340)

Battin soon realized that his original patent required further clarification and he applied for a second patent on his coal breaking machine. In Edward Pinkowski's excellent article, we read:

"The Philadelphia inventor soon realized that his first patent did not protect him much. In it he claimed only the combination of a roller breaking machine with a screen for separating the coal into different sizes. He did not claim the manner of arranging and combining the toothed rollers, and for that omission he was to pay heavily in later years. At all events, when he had made

certain improvements in the arrangement of the toothed rollers, he applied for a new patent in February, 1844.” (*Pinkowski*, p. 339)

Here is a copy of Battin’s application for the second patent:

“UNITED STATES PATENT OFFICE.
JOSEPH BATTIN, OF PHILADELPHIA, PENNSYLVANIA.
MACHINE FOR BREAKING COAL.

Specification forming; part of Letters Patent No. 3,438, dated February 12, 1844; Reissued September 4, 1849, No. 142.

To all whom it may concern:

Be it known that I, JOSEPH BATTIN, of the city of Philadelphia, in the State of Pennsylvania, have made a new and useful Improvement in the Manner of Combining and Arranging the Toothed Rollers Used in Machines for Breaking Coal, which rollers as combined and arranged by me are described as follows in the specification attached to Letters Patent for a machine for effecting simultaneously the breaking and screening of coal granted to me under date of October 6, 1843.

The breaking part of my machine consists of two rollers of cast-iron, the peripheries of which are provided with teeth so placed as that in the revolution of the rollers the teeth of each of them shall stand opposite to the spaces formed by two contiguous teeth on the opposite roller. These rollers are geared together in order to cause them to preserve the same relative positions.

In the above named Letters Patent, this manner of arranging and combining the toothed rollers was not made the subject of a claim, the said patent having been obtained for the combining of a roller breaking machine with a screen for separating the coal into the different sizes required; but as the breaking rollers, so formed, arranged, and combined, are applicable to the ordinary cylinder breaking machine when not used in combination with a screen, and as I have found by continued experiment, that such rollers constitute a real improvement in any breaking machine, I have determined to secure to myself the benefit of such improvement in a distinct and separate patent therefor.

Rollers for the breaking of stone, of ores, of coal, of corn, and of other substances, have been frequently constructed, and are well known. Some of these have been fluted, and others have been furnished with projecting teeth on their surfaces, but they have never, as I verily believe, been made to operate in the manner in which my improved rollers operate. . .”

Battin's patents expired in 1858. Thereafter, the use of breakers became widespread in the anthracite region.

The importance of Battin's invention in the history of the nineteenth century cannot be overemphasized, as Pinkowski appropriately states:

“Hardly anyone in the anthracite region who bends over the iron-teethed rollers that crack the coal and the screens that sort it into various domestic sizes has ever heard of Joseph Battin. This anonymity is strange, for more than anyone else, Battin has left an indelible mark on the hard coal country in northeastern Pennsylvania with his invention of the coal breaker. His name should rank with James Hargreaves, Edward Cartwright, and Eli Whitney, for his invention probably contributed as much to the Industrial Revolution as the spinning jenny, the power loom, and the cotton gin [emphasis added].” (p. 337)

By 1866, the coal breaker in the United States had taken the form most recognized today, with multiple stories and numerous breaking and screening processes and mechanical sorting devices. The first steam-powered shaking screens were used in the United States in 1890, and the first steam-powered coal washers installed in 1892.

First Breakers in Northeastern Pennsylvania:

The first breaker in the Northern Coal Field was built in 1852/1853 at the DL&W's Diamond Mine in Scranton. In *Hollister* (pp. 160-164) we read:

“The false economy of breaking up coal by machinery, in the Northern Coal Field, began under the auspices of the Delaware and Lackawanna and Western Railroad Company at the Diamond Mines in Scranton in 1852. / The first Annual report of this Railroad Company[D&H] made January 1854 [emphasis added] says, ‘that during the present year the steam power coal breaker at Diamond Mines (commenced in 1852) has been completed and put into operations. Additional screens and schutes and other apparatus for preparing the coal for use and loading it in cars, have been erected, the importance of which will be stated hereafter...’ This wealthy and admirably managed Company own a thousand acres of coal land in the vicinity of Scranton upon which it is estimated there is over fifty million tons of excellent coal. / After this original coal breaker in this district went into operation in the fall of 1853, it turned out during the remainder of the year, 5,000 tons of prepared coal.”

The second breaker in the Northern Coal Field was the Von Storch Breaker, which was erected in 1857. About those two breakers (the one at the DL&W's Diamond Mines, and the Von Storch Breaker), we read the following in Chapter XX (pp. 160-164) of *Hollister's* unpublished

manuscript (c. 1880), which is titled “THE INTRODUCTION OF COAL BREAKERS INTO THE LACKAWANNA COAL FIELDS WITH THEIR DESTRUCTIVE FEATURES. VON STORCH BREAKER.”

In *Hollister*, pp. 160-164, we read:

“No one residing in the coal region can forget the time when no other kind of coal was seen or sold but lump coal. The miner or laborer immured with pick and drill in his lengthened chamber, broke up the large lumps in the mines simply to facilitate easier loading into mine cars. In this form anthracite was carried to market and broken only as it was used without waste. Until within a comparatively a short period, no prepared coal found its way into recognition and use. Each piece was fractured by hand with the same patient labor that wood, drawn from the forest in logs or tree tops, required strokes from the axeman to fit it for the fire place. . . The false economy of breaking up coal by machinery, in the Northern Coal Field, began under the auspices of the Delaware and Lackawanna and Western Railroad Company at the Diamond Mines in Scranton in 1852. / The first Annual report of this Railroad Company[D&H] made January 1854 [emphasis added] says, ‘that during the present year the steam power coal breaker at Diamond Mines (commenced in 1852) has been completed and put into operations. Additional screens and schutes and other apparatus for preparing the coal for use and loading it in cars, have been erected, the importance of which will be stated hereafter...’ This wealthy and admirably managed Company own a thousand acres of coal land in the vicinity of Scranton upon which it is estimated there is over fifty million tons of excellent coal. / After this original coal breaker in this district went into operation in the fall of 1853, it turned out during the remainder of the year, 5,000 tons of prepared coal. / No steam coal breaker rose from the mines of the Delaware and Hudson Canal Company until a later date. In 1855 the Von Storch lands lying in Providence, were leased by Messrs. Bowkley and Howard, of Pittston. They organized a Company in 1857 composed of Col. J. W. Johnson, Abell Bennett, B. F. Sawyer, John Howarth, C. Pierson, Ferdinand and G. and Justus Von Storch and others, sank the Van Storch Schaft by the aid of Captain John Martin, erected a coal breaker over it all with the view of sending coal North and West by the Delaware, Lackawanna & Western Railroad. / These Von Storch lands were desired by Maurice and William Wurts, while exploring the Valley for coal before they had chosen the timbered site of Carbondale for mining it. Could these gentlemen in 1812-15 have purchased this rich tract from its owner Henry O. L. Von Storch as they aimed to do, opened mines, sought Cobb’s instead of Rixe’s Gap for an outlet, tenanted the unploughed acres by encouraging and developing a manufacturing town there would have been no Carbondale or Honesdale and the forests then standing upon their sites might yet have rung with the merry notes of wild turkeys and singing birds./ Traditional pride in the judgment of Maurice and William Wurts in reference to these lands, with a correct perception of their value by Thomas Dickson then Superintendent of the gravity railroad and coal department influenced the Delaware and Hudson Canal Company to purchase the Von Storch coal lease with all improvements pertaining to it. The breaker was

removed from the shaft to the mouth of the slope on the Lackawanna half a mile from its original location soon afterwards and up until the Spring of 1874 contributed important tonnage to the Railroad and the Canal. In 1874 this breaker worn out in masticating nearly 2,000,000 tons of coal left its Himmelah mark between Providence and Green Ridge as its monument then dissolved from view only to make room for a new one of greater capacity and greedier proportions. “

In 1858-1859, as we mentioned above, the first D&H breaker, the Racket Brook Breaker, was built. In *Clark* (p. 216), we read:

“Up to 1858, all the coal taken out at Carbondale was upon platform cars, three boxes on each, holding respectively five hundred pounds, which were dumped by hand power, two men doing the work. The coal was then transported to Honesdale, where it was run over grate bars, which was the only means of assorting it. The first breaker erected to break the coal for market was the one above the city [Racket Brook], on the mountain, commencing work about 1858-9.”

Clark’s understanding of the first Gravity coal cars is not the understanding of the D&H. In the D&H’s 1927 *Inspection of Lines* book, we read the following about the first coal wagons on the Gravity Railroad:

"As early as 1827, John B. Jervis, Chief Engineer, had stated that he believed three hundred and twenty railroad 'wagons' would be required to transport five hundred and forty tons of coal daily. / According to journal entries posted in 1829, seventy 'wagons' were purchased from the West Point Foundry at a cost of \$7,045.50. The early type of coal car appears to have had a carrying capacity of about one and one-half to two tons. The box or body was of wood construction. The wheels, of which there were four, one pair at each end, were cast iron of spoke design." (*Passenger, Freight and Work Equipment on the Delaware and Hudson, The Delaware and Hudson Company BOARD OF MANAGERS INSPECTION OF LINES*, June 2, June 5, 1927, p. 9)

Two of those early coal wagons were modified to serve as passenger vehicles when, on June 22, 1830, Philip Hone and a party of twenty persons were conveyed from Honesdale to Carbondale over the D&H Gravity Railroad. In *Inspection of Lines*, 1927 (p. 12), we find the following material on this question:

“... Mr. Hone and a party of twenty persons... were conveyed to Carbondale over the Gravity Road. The train consisted to two coal cars which were apparently large enough to accommodate the travelers.”

Early in this period a trip was made by Philip Hone, the Company's first President, and party from New York to Carbondale. After traveling via the Hudson River and the Company's canal to Honesdale, Mr. Hone and party of twenty persons, on June 22, 1830, were conveyed to Carbondale over the Gravity road. The train consisted of two coal cars which apparently were large enough to accommodate the travelers as it is stated the arrangements, “though crude, were satisfactory.” These cars had been provided with seats and in other respects made tolerably convenient. This appears to have been the first time this road was used for passenger travel.

Journal entries in March, April, May and July, 1831, show that \$21,974.25 was expended for new “wagons,” wheels, axles, etc. Records of that year indicate that two hundred and seventy-five “wagons” constituted the movable property on the Gravity road.

Mileage on the Gravity Road

PREVIOUS DEVELOPMENT

Main—Loaded track

Carbondale to Honesdale - - 16. mi.

DEVELOPMENT—PERIOD 1830 TO 1840

Main—Changes in main - - - 0.5 mi.

Main—Extension to Powderly, etc. - - - 2.5 mi.

Main—Extension to Coalbrook, etc. - - - 1.0 mi.

Sidings - - - 2.8 mi.

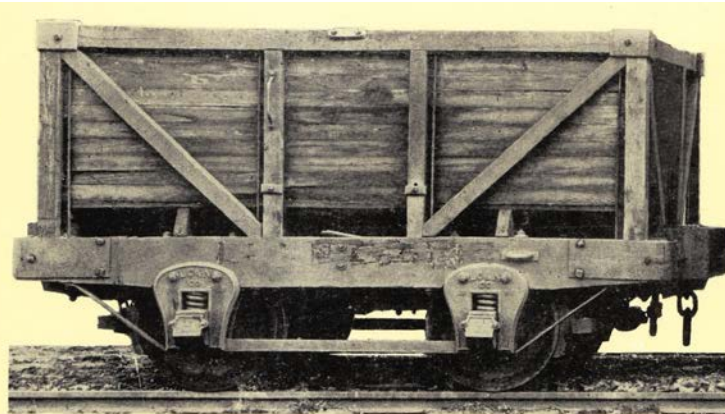
6.8 mi.

Total Mileage 22.8

Total steam mileage—45.95

Total gravity mileage—22.8

In that same volume (p. 22), we find the following material on the D&H's celebrated 4 ½ ton “Jimmy” coal car:



“Jimmy” Coal Car

This “4-wheel” coal car, commonly known on the system as the “Jimmy” car, had a carrying capacity of about four and one-half tons. The dimensions of the body were: length, 7 feet, 6 inches; width, 6 feet, 0 inches; height, 4 feet, 6 inches. The ratchet hand brake was operated by a brake lever on one side of the car and a running board extended its full length. This car was put in service late in this period. The photograph is fairly representative of the type,

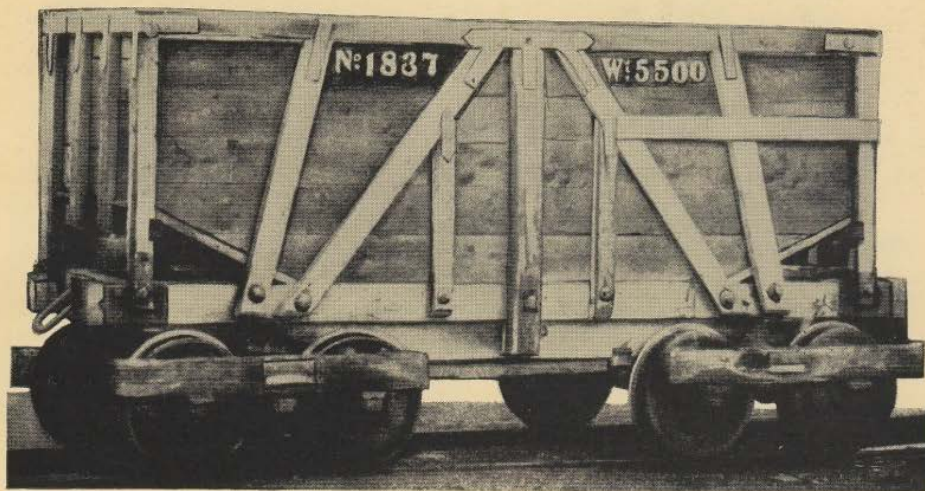
In that same volume (p. 13) we find the following information about D&H coal cars in the period 1840-1850:

Period 1840 to 1850



IN THIS period we find record of eight-wheeled coal cars on the Gravity road. The body was substantially built of wood, twenty feet eight inches long by four feet two inches wide. The weight was about fifty-five hundred pounds, the capacity ranging from four to five tons. The wheels were of cast iron, twenty-four inches in diameter; axles, two and one-half inches in diameter.

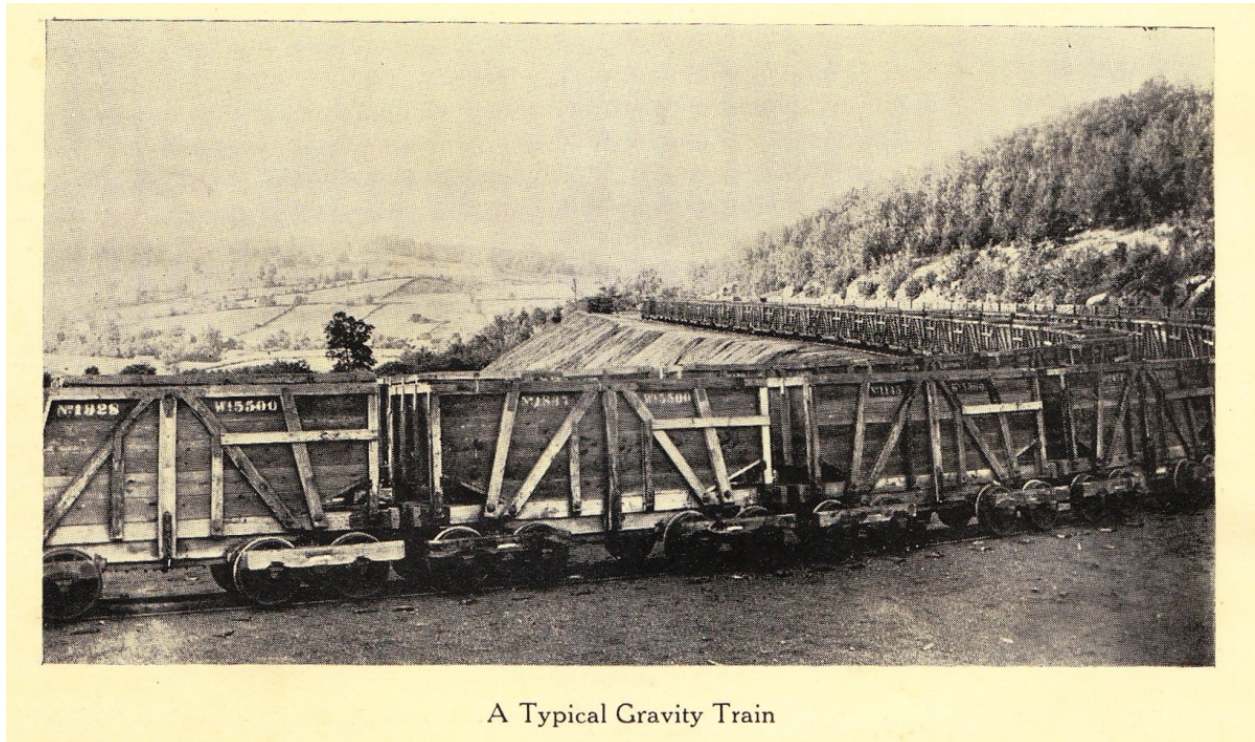
It was common practice to stop gravity trains by the use of pegs called "sprags." These were inserted between the wooden truck side frame and lug on face of car wheel and trainmen developed much dexterity in throwing them into place rather than stopping to position.



Eight-wheeled Gravity Coal Car

The majority of gravity coal cars were not equipped with brakes. The brake, peculiar in design, was of the pull-up type, having four solid cast iron combination brake heads and shoes which hung between the wheels and, when pulled up, effected a wedging action against the wheels, thus retarding movement. There were six levers (three on each side of car), one foot or power lever on the end, one cross bar, four yokes, eight adjusting bolts to take up the slack between shoe and wheel, and two equalizing chains and pulleys. Braking power was induced by pressure through the unique arrangement of levers and was controlled from the end foot lever by the brakeman. In making up trains, the cars with brakes were distributed at suitable intervals, dependent upon the length and weight of trains.

Here is a photo (*Inspection of Lines* : ., 1927, p. 126), taken during the second half of the nineteenth century, of “A Typical Gravity Train” of empty Gravity Coal on Level No. 13. These cars are of the type shown on the preceding page (8-wheeled):



A Typical Gravity Train

1804

Function of a Coal Breaker

The force of gravity was central to the effective and practical functioning not only of the Delaware and Hudson Canal Company's Gravity Railroad, as we demonstrated in Volumes I-V in this series, but also in the effective and practical functioning of the D&H Canal, the locks of which lowered the loaded canal boats, using the force of gravity, as they moved downward from Honesdale to the Hudson River.

The force of gravity was equally important in the effective and practical functioning of all coal breakers. This is true, in that the coal from the mines was moved to the top of all breakers in order that the force of gravity might be used to process the coal as it moved downward through the breaker.

At the top of the breakers, no two of which were identical in design, the coal was dumped into hoppers and then passed over iron bars to separate out the largest pieces of coal and rock. The coal, under the force of gravity, then moved downward through various kinds of sorting and breaking devices and rollers, and across screens that removed a high percentage of the impurities from the coal as it came from the mines and sorted the coal by size.

Technological innovations were developed after 1860 to better wash the coal and separate it from impurities. These included washing sprays and flotation in agitating baths known as jigs. Such a flotation cone/agitating bath is known as a menzies cone. The cone has water in it that has been mixed with magnetite. Enough magnetite is added to the water to lower its specific gravity to the extent that the coal floats and the rock sinks. The coal is removed and screened. The rock discarded. The magnetite in the water is recovered and reused.

In the last stage of the process the coal passed down chutes past slate pickers, who were at the bottom of the pay scale for above-ground workers. (Below ground the youngest—and lowest status—workers were the boys, as young as 8, who opened and closed the doors to permit men, mine cars, and equipment to pass. Those doors controlled the flow of ventilation through the workings.) Slate pickers, generally young boys or disabled/infirm former miners, removed any remaining slate or other impurities by hand, casting the refuse into a waste chute.

Moving downward from the slate pickers, the coal fell onto screens from which it passed downward to storage bins.

Different markets/end uses of coal required different sizes of coal. The sorting by size is particularly important for anthracite coal because anthracite burns most efficiently when the pieces of coal to be burned are more or less of the same size, which allows air to flow evenly around the coal.

In the second decade of the twentieth century, there were seven commercial sizes of coal, with the smallest size, buckwheat, having three subsets:

Steam	4.5 to 6 inches in size (primarily used as steamship fuel)
Broken	3.25 to 4.5 inches in size
Egg	2.25 to 2.3 inches in size
Stove	1.5 to 1.625 inches in size (primarily used for use in home cooking stoves).
Chestnut	0.875 to 0.9375 inches in size

Pea 0.5 to 0.625 inches in size

There were three subsets of "pea coal":

No. 1 Buckwheat 0.25 to 0.3125 inches in size

No. 2 Buckwheat 0.1875 inches in size

No. 3 Buckwheat 0.09375 to 0.125 inches in size

Coal pieces smaller than 0.09375 inches in size were considered "culm," and unable to be separated from the impurities--and thus useless. The grade of coal ranged from a low of 5 percent impurities for steam or broken coal to a high of 15 percent for pea-size coal and its subsets.

In the third decade of the twentieth century, there were nine commonly accepted sizes of D&H coal: lump, broken or grate, egg, stove, chestnut, pea, buckwheat, rice, and mustard seed. In the *Delaware and Hudson Company Bulletin* of June 15, 1929, we read:

"There are nine commonly accepted sizes of coal, namely: **lump**, which includes any pieces larger than four inches in diameter; **broken or grate**, including pieces ranging between four and two and one-half inches in diameter; **egg**, two and one-half to one and three-quarters; **stove**, one and three-quarters to one and one-quarter; **chestnut**, one and one-quarter to three-quarters; **pea**, three-quarters to one-half inches; **buckwheat**, one-half to one-quarter inches; and **rice** and **mustard-seed** are even smaller."The City of the Black Diamond, Part III. Civic and Industrial Growth [of Wilkes-Barre]," *The Delaware and Hudson Company Bulletin*, June 15, 1929, pp. 181-182, 189)

Shown below is a coal sales display item, from Canada, that was sold on E-Bay on September 1, 2015. The six sizes of coal offered here for sale are: egg, stove, nut, pea, buck, and rice.





1805

D&H Breakers, 1875

From a notice in the January 30, 1875 issue (p. 3) of the *Carbondale Advance*, we learn that the D&H owned and worked at that time 29 collieries between Carbondale and Plymouth:

“The D. & H. Canal Company own and work twenty-nine collieries between Carbondale and Plymouth.” (*Carbondale Advance*, January 30, 1875, p. 3)

1806

D&H Breakers, Eastern District of the Wyoming Coal Fields, 1877

From “Table No. 7” in *Reports of the Inspectors of Mines of the Anthracite Coal Regions of Pennsylvania, for the Year 1877 for the Eastern District of the Wyoming Coal Fields, Luzerne County, PA* (hereinafter referred to as *1877 Mine Inspectors Reports*), pp. 164-165, we learn that in 1877 the Delaware and Hudson Canal Company had 10 breakers, with a total number of openings as follows: 17 shafts, 2 slopes, and 9 drifts or tunnels:

Von Storch slope: two shafts, one slope

Leggett’s Creek shaft: two shafts

Marvine shaft: one shaft

Eddy Creek shaft: 2 shafts

No. 1 and No. 2 colliery, Olyphant: two drifts or tunnels,

Grassy Island shaft: two shafts

White Oak colliery: two shafts, one drift or tunnel

Powderly colliery /No. 1 shaft and W. B. Tunnel: one shaft, one slope, one drift or tunnel

No. 3 shaft: two shafts

Coal Brook colliery: three shafts, five drifts or tunnels

Here is the Delaware and Hudson Canal Company section (p. 165) of Table No. 7 of the *1877 Mine Inspectors Reports, for the Year 1877, for the Eastern District of the Wyoming Coal Fields*, in which precise data are reported on the collieries owned and operated by the D&H at that time.

Delaware and Hudson Canal Company

NAME OF COLLIERY.	SHAFTS.					SURFACE SLOPES.				UNDERGROUND SLOPES.				Total depth of mines in feet.	ELEVATION.		TOTAL OPEN'GS.			
	Number of.	Length in feet.	Width in feet.	Depth in feet.	Elevation of head ab. tide-water, in feet.	Number of.	Length in feet.	Vertical depth in feet.	Elevation of head ab. tide-water, in feet.	Number of.	Length in feet.	Vertical depth in feet.	Elevation of head ab. tide-water, in feet.		Of bottom above tide-water, in feet.	Of bottom below tide-water, in feet.	Shafts.	Slopes.	Drifts and tunnels.	Number of coal breakers.
Von Storch slope,	2	30	10	540	1,177	1	225	..	..	1	350	..	..	540	560	..	2	1	..	1
Leggett's Creek shaft,	2	24	10	340	789	..	..	..	..	1	300	15	449	355	434	..	2	..	..	1
Marvine shaft,	1	44	10	330	742	..	..	..	..	..	..	..	..	330	412	..	1	..	..	1
Eddy Creek shaft,	2	27	10	408	782	..	..	..	..	1	450	..	..	408	377	..	2	..	..	1
No. 1 and No. 2 colliery, Olyphant,*	..	23	10	386	785	..	..	..	..	..	..	..	..	..	..	..	..	..	2	1
Grassy Island shaft,	2	14	10	170	879	..	..	..	..	2	500	16	633	291	617	..	2	..	..	1
White Oak colliery,	2	10	7	90	1,022	..	..	..	..	1	1,050	..	..	90	1,022	..	2	..	1	1
Powderly colliery.*	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
No. 1 shaft and W. B. tunnel,	1	11	11	89	998	1	450	65	998	..	..	..	..	89	909	..	1	1	1	1
No. 3 shaft,	2	24	9	70	1,022	..	..	..	..	..	..	..	..	70	952	..	2	..	..	1
Coal Brook colliery,	3	10	8	25	1,073	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Totals,	17	..	..	..	..	2	..	..	..	8	..	..	..	..	..	..	17	2	9	10

1807

D&H Breakers, 1878

The Anthracite Coal Fields of Pennsylvania with their Outlets to Market by Geo. B. Strauch and A. B. Cochran, Mining Engineers, Pottsville, PA, 1878:

Under the heading “LEHIGH AND THIRD, NORTHERN OR LUZERNE COAL FIELDS, Third or Luzerne Coal Field. Western or Wilkesbarre District,” [emphasis added] the following Delaware and Hudson C. Co. collieries are listed: Mill Creek, Pine Ridge, Laurel Run, Baltimore No. 1, Baltimore No. 3, No. 2 Plymouth, No. 3 Plymouth, No. 4 Plymouth, No. 5 Plymouth.

Under the heading “LEHIGH AND THIRD, NORTHERN OR LUZERNE COAL FIELDS, Third or Luzerne Coal Field. Eastern or Pittston and Scranton District,” [emphasis added] the following Delaware and Hudson C. Co. collieries are listed: Von Storch, Eddy Creek, W. Bridge Tunnel, White Oak, Coal Brook, Racket Brook, Marvine Shaft, Leggitt’s Creek Sh.

1808

D&H Breakers, 1879

Valuable research tools for learning about breakers/collieries in the anthracite region are the annual *Reports of the Inspectors of Mines of the Anthracite Coal Regions of Pennsylvania*. From the report for 1879, for example, in Table No. 6, pp. 274-276, we learn a great deal of information about the ten D. & H collieries in the "Eastern District of the Wyoming Coal Field, lying east of and including Jenkins Township, Luzerne County, Pa."

NAMES OF THE COLLIERIES.	Persons killed.	Persons seriously injured.	Persons slightly injured.	Days worked by breaker.	Number of persons employed.	Tons of coal mined per employee.	Tons of coal mined per life lost.	Kegs of powder used.	Tons of coal mined during 1879.
Delaware and Hudson Canal Company.									
Von Storch's slope,	1	7	4	264½	537	513.3	275,639.06	6,891	275,639.06
Leggett's Creek shaft,	2	4	1	180½	303	397.25	60,158.57	3,009	130,377.15
Marvine's shaft,	1	3	6	238½	339	540	183,233.05	4,588	183,233.05
Eddy Creek shaft,	1	7	5	208½	288	373.42	No death,	3,585	107,544.03
Grassy Island shaft,	2	3	3	211½	360	408.87	73,597.04	4,906	147,194.17
White Oak colliery,	1	4	3	25½	337	427.80	144,170.12	3,664	144,170.12
No. 1 shaft and White Bridge tunnel,	1	1	1	294	305	...	No death,	416	12,487.16
No. 3 shaft,	1	2	2	54	109	...	...	129	8,887.12
Coal Brook colliery—5 tunnels, . . . . .	...	...	...	180½	467	374.23	No death,	5,826	174,790.17
Rackett Brook breaker, . . . . .	...	...	...	220½	84	...	No death,	5,893	176,788.10
Total, Delaware and Hudson Canal Company,	8	31	24	...	3,129	490.5	168,264.2	38,847	1,346,113.10

We learn, for example, that there were 3,129 people employed at these 10 D&H collieries in the Eastern District of the Wyoming Coal Field in 1879 and that in that year at those 10 collieries, using 38,847 kegs of power, 1,346,113.10 tons of coal were mined.

D&H Breakers, 1880

Hollister (THE INTRODUCTION OF COAL BREAKERS INTO THE LACKAWANNA COAL FIELDS WITH THEIR DESTRUCTIVE FEATURES. VON STORCH BREAKER) lists the Delaware and Hudson collieries in 1880 in Chapter XX, pp. 160-164, of his unpublished D&H manuscript. Before he does so, however, he launches an attack on the coal breaker, not only as “one of the greatest conspirators of modern times against economy,” but also as a despoiler of the landscape and the streams of the anthracite region. Listen to what Hollister had to say about the environment in 1880, ninety years before the Environmental Protection Agency was established on December 2, 1970:

“No one residing in the coal region can forget the time when no other kind of coal was seen or sold but lump coal. . . One of the greatest conspirators of modern times against economy is that invention of the devil known as a Coal Breaker; an institution that inaugurated a system of waste and loss of anthracite beyond repair and almost beyond measure. When posterity contemplates the flattened hills and culm-burning valleys a century hence this enemy will be taunted as the robber of the Continent. / The credit or reproach of instituting one in this coal district, does not belong to this [D&H] Company. It was a disastrous day for all anthracite regions when competing coal men assented to waste a third part of the coal by breaking and screening it, for the sake of saving the remaining two-thirds in a prepared form. The eruptions of culm piles, heightened into pyramids or Black hills, all formed of the purest coal around every breaker from Carbondale to Nanticoke, exhibit the certainty and rapidity with which our streams are being choked and our mountains depleted of their value by a process alike wasteful and exhausting. True, it offers it advantages to the indolent consumer but how fatal to the interior and exterior of our frail and unresisting hills and valleys! / The actual loss in coal while the iron teeth and tireless jaws of the breakers subdue lump into ordinary stove coal, has been estimated by Daddow at 20 to 25 per cent. This estimate is too small according to more competent judges. I. W. Chittenden, a gentleman whose unquestioned good judgment and official position in the Delaware and Hudson Canal Company, gives weight to his opinion, has investigated this matter most thoroughly. By the most careful and repeated computations, he found the actual loss of volume in anthracite while preparing it by the usual grinding or breaking process, to be precisely 29 5/10 per cent, or about one-third of its real weight. This appalling amount is a total loss to coal territory, to all Companies engaged in its production and to the world at large. / The Delaware and Hudson Canal Company alone own four hundred millions tons of coal, over and above the fifty million tons already mined including wastage in culm. Before half of this is mined, provided the same destructive plan of preparing it as now is continued, the culm piles which already suffocate villages and smother the cities along the Lackawanna will close up the valley with a mountain of ground coal higher than the Moosic and obliterate this fair vale from the sight of coming generations. / Within the Schuylkill, Lehigh, Lykens, Wyoming and Lackawanna coal area sufficient culm has been swelled into hills to go far toward liquidation of the national debt by supplying twenty generations of come with fuel provided it could be utilized. . .

The Coal Department of the Delaware and Hudson Canal Company under the Superintendence of A. H. Vandling, is constituted by the following collieries operating within the two valleys of Lackawanna and Wyoming. Coal Breakers are in the ascendant and every colliery but the three first mentioned is supplied with a steam coal breaker.

COLLIERIES.

No. 1 Shaft,
No. 3 Shaft,
Powderly,
Racket Brook Breaker
Coal Brook,
Erie,
Jermyn No. 1,
Jermyn No. 2,
Jones, Simpson & Co.,
White Oak,
Grassy Island
Olyphant No. 1,
Olyphant No. 2.
Elk Hill Coal Co.,
Marvine Shaft
Leggitt's Creek,
Von Storch
Riley & Co,
Park Coal Co,
Jermyn's Breaker
Coray
Spring Brook
Pleasant Valley
Mill Creek
Pine Ridge
Laurel Run
Baltimore Slope
Baltimore Tunnel,
Plymouth No. 1,
Plymouth No. 2,
Plymouth No. 3,
Plymouth No. 4
Plymouth No. 5.
Young Slope.

Coal mines cannot be worked even by the most careful miner nor can these Breakers scattered

for forty miles along the Lackawanna and Susquehanna, display their greedy functions without accident and death.”

1810

D&H Breakers, 1886

The Delaware and Hudson Canal Company breakers in the First Anthracite District listed in the *Reports of the Inspectors of Mines*, 1886, p. 4, are: Coal Brook Tunnel, Dickson Shaft, Eddy Creek Shaft, Grassy Island Shaft, Jermyn No. 1 Shaft, Leggitt’s Creek Shaft, Marvine Shaft, Midland Tunnel, Number 1 Shaft, Number 3 Shaft, Olyphant No. 2 Shaft, Powderly Slope, Von Storch Slope and Shaft, White Oak Slope and Tunnel, White Bridge Tunnel, Rackett Brook Breaker.

In that same year, A. H. Vandling was General Superintendent of the Coal Department; J. M. Chittenden, General Outside Assistant; Andrew Nicol, General Mine Superintendent, A. B. Nicol, Assistant General Mine Superintendent; Alexander Simpson, General Master Mechanic.

In an article that was published in the August 24, 1886 issue of the *Carbondale Leader*, the report of a correspondent of the *New York Coal Trade Journal* about the holdings of the Delaware and Hudson Canal Company in the Scranton area at that time is presented. Here is that article:

“A correspondent of the *New York Coal Trade Journal*, writes for that paper an interesting letter from Scranton giving an account of coal mining operations in this valley. We extract so much of it as has reference to local companies and collieries. / The Delaware and Hudson Canal Company, are the second largest holders of property in the Scranton district. They have thirty-two collieries in operation, most of which they own, and from the others purchase and ship. They mine coal throughout the valley at places scattered about forty miles, and thus work in all the various seams. The collieries contain all the modern improvements for mining and preparing the coal, which is shipped to all parts of the United States. The output last year amounted to over four million tons, and up to the first of August, 1886, was 330,000 tons in excess of August, 1885. . .” (*Carbondale Leader*, August 24, 1886, p. 4)

D&H Breakers, 1887

In 1887, in the Second Anthracite District (H. McDonald, Inspector of Mines, Pittston, PA), the D&H had three collieries: Mill Creek Shaft and Slope (Plains Township, Luzerne County), Pine Ridge Shaft (Miner's Mills borough, Luzerne County), and Laurel Run Slope (Parsons borough, Luzerne County). In 1887 in the Second Anthracite District, the Delaware and Hudson Canal Company mined 434,954.19 tons of coal.

In 1887, in the Third Anthracite District (G. M. Williams, Inspector of Mines, Wilkes-Barre, A), the D&H had 9 collieries, all under Superintendent A. H. Vandling and C. H. Scharar, engineer: Baltimore Slope (Wilkes-Barre township), Baltimore Tunnel (Wilkes-Barre), Baltimore Shaft (Wilkes-Barre township), Conyngham (Wilkes-Barre), Boston (Plymouth Township), No. 2 Plymouth (Plymouth), No. 3 (Plymouth), No. 4 (Plymouth), No. 5 (Plymouth).

G. M. Williams, Inspector of Mines for the Third Anthracite District, offered the following comments (p. 52) on mine improvements during 1887 at the D&H collieries in the Third Anthracite District:

"Delaware and Hudson Canal Company.—A new opening was effected for the Conyngham colliery, connecting with the workings of the Baltimore slope, in October, 1887. It provides a convenient escape way for the workmen of both collieries, and makes everybody connected with those mines feel safer in case anything should happen to prevent exit through the main openings. / The No. 2 Baltimore shaft is now at a depth of over 500 feet, and is expected to cut the Red Ash seam at a depth of 670 feet. At No. 3, which is to constitute the second opening, gangways are being driven to open work, and to be ready to ship coal when the main shaft shall be completed. / At the Boston mines the fan at No. 3 was applied to ventilate its workings, and it gives fair results. Still the ventilation of this mine is not satisfactory, but when the air-ways are fully prepared, an improvement is confidently expected."

An enthusiastic article of praise of the D. & H. was published in the Tuesday, November 15, 1887 issue of the *Wilkes-Barre Newsdealer*. That article was reprinted in a Carbondale newspaper, *The Journal*, of November 17, 1887. Here is that article:

"The D. & H. Railroad. / The *Wilkes-Barre Newsdealer* of Tuesday has the following complimentary notice of the D. & H. railroad and its managers:-- / During the past few months both freight and passenger traffic has about doubly increased on the Pennsylvania Division of the D. & H. Road, which is an indication that the road is becoming popular. This can alone be attributed to good management, as long as such wide awake men as General Passenger Agent

Burdick, Distinct Passenger and Freight Agent Wheeler and Superintendent Manville are at the helm. The road was never in better shape, and additional improvements are being constantly added. The passenger trains make close connections with all roads, and aside from that, the road is one of the safest in the country. The D. & H Gravity Road, extending from Carbondale to Honesdale, is still being liberally patronized, and the ride, at this time of the year, is certainly an invigorating one. The road is open the whole year round.” (*The Journal*, November 17, 1887, 3)

In the early winter months of 1887, all of the collieries in the Lackawanna Valley were worked very close to their full capacity. The miners and railroad men were drawing big pay and the outlook for the winter was very encouraging. In *The Journal* of November 24, 1887. We read:

“There probably never has been a time when all the collieries in the Lackawanna Valley have been so nearly worked to their full capacity as has been the case for the past two months. Even at the low rates of wages, the miners and railroad men are drawing big pay, and the outlook for the coming winter is encouraging indeed for them. The large amount of money disbursed in this section by the various mining and transportation companies ought to make other kinds of business also boom in the valley.” (*The Journal*, November 24, 1887, p. 3)

1812

D&H Breakers, 1897

In 1897, the D&H operated the following breakers:

Leggetts Creek
Marvine
Eddy Creek
Olyphant No. 2
Grassy Island
White Oak
Jermyn No. 1
No. 1 Shaft
Powderly
No. 2 Shaft
Coal Brook
Racket Brook
Clinton

1813

Breakers, Mostly D&H

In the pages that follow, we will have a look at a lot of breakers, most of them D&H breakers.

An interesting person in any history of breakers in the Lackawanna and Wyoming Valleys is R. B. Brockway, “who probably has built more and larger coal breakers in the Lackawanna and Wyoming valleys than any other one builder.” In the *Carbondale Advance* of September 20, 1879, we read:

"R. B. Brockway, who probably has built more and larger coal breakers in the Lackawanna and Wyoming valleys than any other one builder, is now engaged in erecting coal chutes for the N. Y., L. E. & W. R. R. Co., near their engine houses in the upper end of the city." (*Carbondale Advance*, September 20, 1879, p. 3)

1814

Anna Kate Colliery

Located in Forest City

See p. 14 of *Collieries Along the Trails A Report to the Rail-Trail Council of Northeast Pennsylvania*. Part II, April 25, 2014 by March C. Walsh, for names of persons killed at Anna Kate colliery.

1815

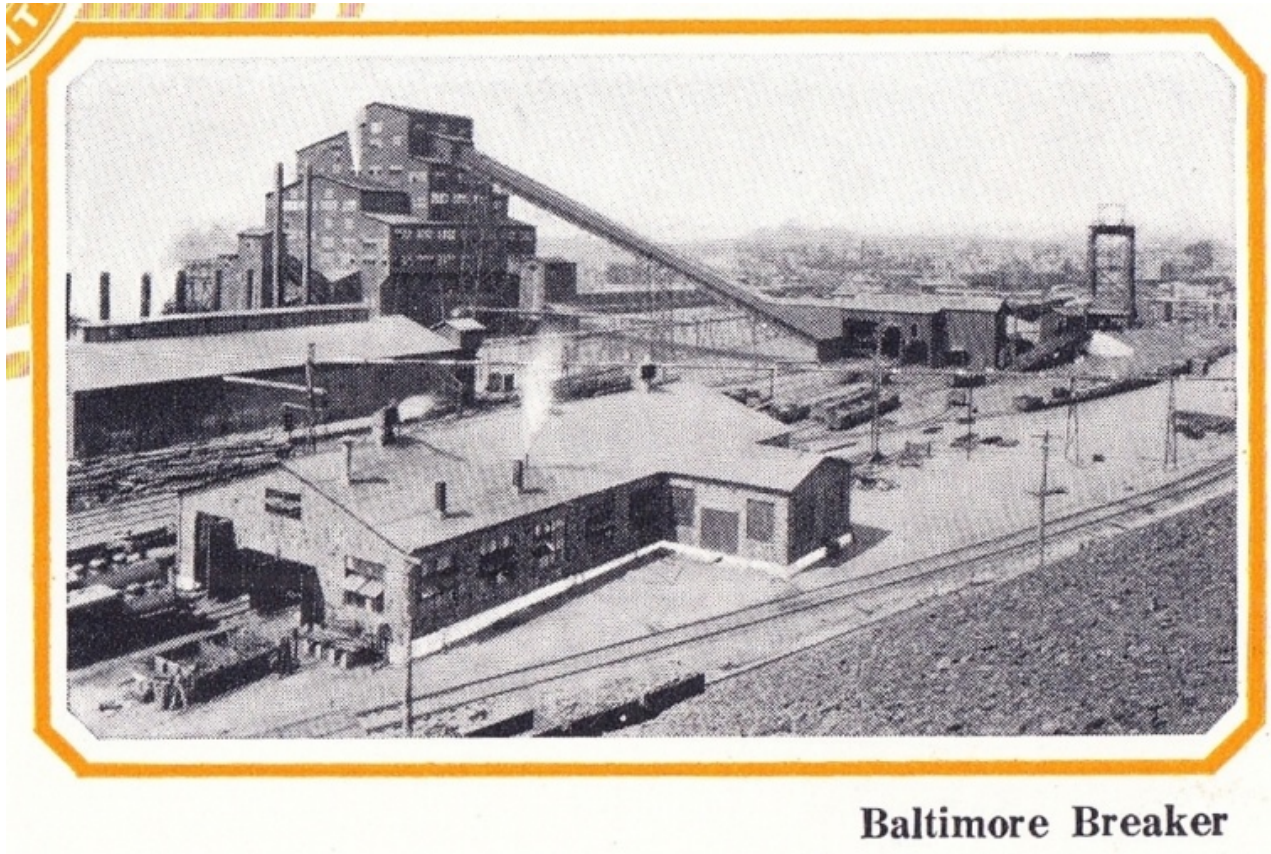
Baltimore Slope, Wilkes-Barre Township

Baltimore Slope and Baltimore Tunnel were D&H properties.

See: *The Anthracite Coal Fields of Pennsylvania with their Outlets to Market* by Geo. B. Strauch and A. B. Cochran, Mining Engineers, Pottsville, PA, 1878:

Under the heading “LEHIGH AND THIRD, NORTHERN OR LUZERNE COAL FIELDS, Third or Luzerne Coal Field. Western or Wilkesbarre District,” the following Delaware and Hudson C. Co. collieries are listed: Mill Creek, Pine Ridge, Laurel Run, Baltimore No. 1, Baltimore No. 3, No. 2 Plymouth, No. 3 Plymouth, No. 4 Plymouth, No. 5 Plymouth.

The photograph given below of the Baltimore Breaker is given in the 1929 *Hudson Coal* booklet:



Accidents: Baltimore Slope, 1879, 1887:

Report of Inspectors of Mines, 1879: July 10, Baltimore Colliery, No. 1, Daniel Evans received severe flesh wound on leg; no bones broken; caused by chain breaking on plane.

Report of Inspectors of Mines, 1879: p. 161: On May 21, at Baltimore Slope No. 3, Jacob Wasle was in a non-fatal accident (leg broken in two places, by piece of coal rolling on it).

Report of Inspector of Mines, 1887, p. 69: September 27, Anthony Welsh, a miner, age 40, married with two children, was in a non-fatal accident (face and arms burned by an explosion of a cartridge of powder) at the Baltimore Slope in Wilkes-Barre Township.

Accidents, 1887: Baltimore Tunnel (Wilkes-Barre), Third Anthracite District:

Report of Inspectors of Mines, 1887:

p. 62: March 18, Edward Williams, laborer, age 25, married with two children, was killed by a fall of rock in the Baltimore Tunnel.

p. 63: October 31, James Ferry, a laborer, age 27, married, was killed by a fall of coal in the Baltimore Tunnel.

p.71: December 1, Thomas Mullen, a miner, age 40, married with 4 children, was in a non-fatal accident (back and ankle bruised and cuts on head by a fall of coal) at the Baltimore Tunnel.

1816

Barton Breaker

The Barton Breaker on Belmont Street in Carbondale was owned by W. L. Barton. Here is his ad for coal for sale that was placed in the *Carbondale Leader* in 1898-1899:

"COAL! COAL! / Best Quality, Lowest Price. / We are now mining coal from the top vein, and are prepared to take orders for the BEST COAL IN THE VALLEY at living prices. / **PEA COAL.** / At Breaker \$1.50 per ton / Delivered anywhere in the city, \$1.85 per ton / **All Larger Sizes.** / At Breaker \$2.00 per ton / Delivered anywhere in the city, \$2.50 per ton / Orders may be left at the Breaker on Belmont st., or at A. D. Wyllie's, Belmont street, cor. Maple ave., or at I. Brauer's Bakery, cor. Church and North Main streets. / W. L. BARTON, Prop'r." (*Carbondale Leader*, January 1, 1898, p.3; also *Carbondale Leader*, January 4, 1899, p. 7)

1817

Belmont Mines

The Belmont mine, near Belmont Avenue in Carbondale, was opened by Joseph Birkett. Coal mined here was processed at the Birkett Breaker.

Interesting facts about this mine are reported in *1880* (p. 447), as follows:

"BELMONT MINE. / This mine, near Belmont avenue, was opened in 1862 by Joseph Birkett, the owner, who operated it ten years and then leased to Thomas Brennan, Holborn & Kelley. In 1879 Mr. Birkett sold to Watt & Co., and they leased to Watkins & Williams, who now operate

the mine. This mine produces a superior quality of coal, which is used mostly for home consumption, though some is shipped, being hauled to the railroad by wagon. There is one engine, of 50 horse power. The mine is worked to its full capacity, 50 tons per day." (1880, p. 447)

In 1880 (p. 452F), we read: "D. W. WILLIAMS, of Watkins & Williams, operators of the Belmont coal mine, was born in Wales, in 1855, and married Jane Roberts. He came to Carbondale in 1869 and engaged in mining for the D. and H. Canal Company."

In 1880 (p. 452F), we read: "WILLIAM W. WATKINS, of Watkins & Williams, operators of the Belmont coal mines, was born in Wales, in 1832, and married Esther Lewis. He came to Carbondale in 1869, and mined for the D. and H. Canal Company until 1876, when the above named firm was formed."

On August 1, 1881, sixteen unruly boys from the Belmont Street area were arrested for malicious mischief at the Watkins & Williams mine on Belmont Street. In the *Carbondale Leader* of August 5, 1881, we read:

"Belmont street boys are proverbially unruly. Last Monday a set of sixteen boys were arrested for malicious mischief and brought before 'Squire Thompson. For some time Watkins & Williams, operators of a mine in that neighborhood, have been annoyed by these boys. They tore down an air-stack, ran cars down the grade into the mine, breaking the doorway placed to regulate the current by which the mine is ventilated, and played pranks of that nature. The magistrate after a hearing bound eight of them over to the next term of court and allowed the others to go with an admonition." (*Carbondale Leader*, August 5, 1881, p.4)

Reports of the Inspectors of Mines, 1887, p. 7: Belmont Tunnels, Carbondale City, Lackawanna County, 29,688.15, total production in tons of coal, 155 persons employed, 15 horses and mules.

1818

Birkett Coal Breaker

In December 1870, Joseph Birkett offered for sale "his valuable coal property, including mines, coal breaker, and other appliances for carrying on the business." Here is the ad that he placed in the *Carbondale Advance* of December 10, 1870:

"Coal Property for Sale / The subscriber offers for sale his valuable Coal Property, including / **Mines, Coal Breaker,** / and other appliances for carrying on the business. / There are two veins opened, one of seven and a half and one six feet, and are being daily worked, producing Coal

unsurpassed in quality. There are about ten acres of land, conveniently situated in the First Ward of Carbondale, and altogether it affords superior facilities for doing a prosperous and lucrative business. / Possession given immediately. Terms reasonable—or other Real Estate will be taken in exchange. / Enquire on the premises of / **JOSEPH BIRKETT**, / Carbondale, Nov. 26, 1870." (*Carbondale Advance*, December 10, 1870, p. 3)

In January 1875, Joseph Birkett sold his coal lands in Carbondale to Messrs. A. B. Nealon and Michael Gilmartin for \$12,000. The following account of the sale was published in the *Carbondale Advance* of January 2, 1875:

"Sale of Coal Works. / We are informed that Mr. Joseph Birkett has sold his coal lands in town to Messrs. A. B. Nealon and Michael Gilmartin—consideration \$12,000. The sale, we believe, embraces what remains of the first and second veins of coal and the yet unopened third vein, with the Breaker and machinery used in the business—subject to the lease of Thos. Brennan. The purchasers receive the royalty from him as it accrues, and take possession immediately. The surface we learn is not included in the sale." (*Carbondale Advance*, January 2, 1875, p. 3)

On Tuesday morning, February 27, 1883, the Birkett Coal Breaker burned down. Here is the account of the fire that was published in the *Carbondale Advance* of March 3, 1883:

"Burning of a Coal Breaker. / On Tuesday morning of this week at about half past three o'clock a vigorous fire alarm was sounded. Our aroused citizens were surprised to find that the fire was at the Birkett Coal Breaker, now owned by Messrs. J. E. & W. W. Watt and D. Scurry, and leased by Watkins & Williams. It quickly burned to the ground. / There were about 100 tons of Coal in the Breaker, which was burned with it, belonging of course to Watkins & Williams, also 4 cars, harness and equipments. A fine business for individual operators was now being done there, the average being about 50 tons per day, or 300 tons per week. / The breaker was bought by the present owners in the purchase from Mr. Birkett, with the land, and has been in use since. It was insured in Lathrop's agency for \$2,000. There is still coal to mine there, and it will probably be rebuilt." (*Carbondale Advance*, March 3, 1883, p. 3)

1819

Blue Ridge Coal Company Breaker

Blue Ridge C. Co. Breaker (listed in 1898 First District mine report)

Blue Coal Breaker, Carbondale

On June 30, 1979, the Blue Coal breaker on the west side of the D&H main line behind Carbondale's Ready Mix Cement was under construction. That we know from the caption on a photo that was taken by Mike Bischak on that date and which was published in the November 2016 issue of the *Bridge Line Historical Society Bulletin*, p. 17. Here are that photograph and caption:



BLHS *Bulletin* – November 2016

17

BLHS Bulletin, November 2016, p. 17: “D&H GP39-2 #7401, U23B #2316 (Altschul blue), and GP38-2 #7319 (Altschul blue) on a northbound freight passing the under-construction Blue Coal breaker on the west side of the D&H main behind Carbondale's Ready Mix Cement. June 30, 1979 photo by Mike Bischak.”

1821

Boston Colliery, Archbald

In the March 18, 1871 issue of the *Carbondale Advance*, we read the following about the Boston and Lackawanna Coal Company at Archbald:

“It is stated that the Del. & Hud. C. Co. have purchased the colliery of the Boston and Lackawanna Coal Co. at Archbald.” (*Carbondale Advance*, March 18, 1871, p. 3)

1822

Boston Colliery, Plymouth Township

In *The Anthracite Coal Fields of Pennsylvania with their Outlets to Market* by Geo. B. Strauch and A. B. Cochran, Mining Engineers, Pottsville, PA, 1878, four D&H collieries in Plymouth are listed. The Boston Colliery is not among them:

Under the heading “LEHIGH AND THIRD, NORTHERN OR LUZERNE COAL FIELDS, Third or Luzerne Coal Field. Western or Wilkesbarre District,” the following Delaware and Hudson C. Co. collieries are listed: Mill Creek, Pine Ridge, Laurel Run, Baltimore No. 1, Baltimore No. 3, No. 2 Plymouth, No. 3 Plymouth, No. 4 Plymouth, No. 5 Plymouth.

On Sunday, January 16, 1887, the Boston Breaker of the Delaware and Hudson Canal Company at the upper end of Plymouth took fire and was totally consumed. In the *Report of Inspectors of Mines*, 1887, p. 53, we read:

“On Sunday, January 16, 1887, between one and two o’clock A.M., the Boston breaker of the Delaware and Hudson Canal Company, at the upper end of Plymouth, took fire and was totally consumed. It is now known how it originated, but everything in and about the breaker was destroyed. By November 3rd, a new breaker was erected near the Boston shaft, about a mile and a quarter north-east of the site of the old one. This is a great improvement on the old one. They began to pass coal through it on the date mentioned. They worked eight and one-fourth days before the old breaker took fire and forty-one and three-fourths days with the new one before the close of the year.”

A fact-filled account of that same fire on January 16, 1887, in which the D&H Boston Breaker at Plymouth was destroyed was published in *The Journal*, January 20, 1887, p. 3. From that article we learn that:

- The Boson Breaker was erected in 1875 by the Plymouth Coal Company, and then sold to the Delaware and Hudson Canal Company.
- The breaker was leased by the D&H to the DL&W until about 1884, when the D&H resumed ownership of the breaker.
- At the time of the fire in 1887, 500 men and boys worked in the Boston Breaker.
- The Boston Breaker had a capacity of about 800 tons a day.
- Charles Lawson was outside foreman and Edward Peckham was superintendent at the Boston Breaker.

Here is the complete text of that fact-filled article from *The Journal* of January 20, 1887:

"D. and H. Breaker Burned. / The Boston breaker of the Del. & Hud. C. Co. in the upper end of Plymouth was destroyed by fire on Sunday morning. All efforts to save the structure were unavailing. The Wilkes-Barre *Record* says: The breaker was erected some 12 years ago by the Plymouth Coal Co. and was subsequently sold to the D. & H. C. Co., from whom the D. L. & W Co. leased it and operated until about three years ago, when the D. & H. resumed possession and have operated it since. The mine and breaker employed together about 500 men and boys who will be temporarily thrown out of work. Arrangements will be made as rapidly as possible to remove the coal taken from the mine to one of the other breakers operated by the company in that vicinity and prepare it for market. The breaker had a capacity of about 800 tons a day. Charles Lawson was outside foreman and Edward Peckham superintendent. The total loss is estimated at about \$70,000. The D. & H. C. Co. insure most of their breakers themselves and it is understood that this was so secured." (*The Journal*, January 20, 1887, p. 3)

1823

Brennan's Railroad and Breaker

From an article that was published in the *Carbondale Advance* of August 11, 1860, we learn that Brennan's Railroad and Breaker were being pushed forward to completion at that time. Here is that article:

"Brennan's Railroad and Breaker are also being pushed forward to completion. Coal will soon be furnished from all of these new openings [Vanstorch Shaft in Providence, Richmond & Co., Jones & Co., Offerman's Breaker, Brennan's Railroad and Breaker]." (*Carbondale Advance*, August 11, 1860, p. 2)

In *Reports of the Inspectors of Mines*, 1887, p. 7, we read the following about Brennan's Tunnels, Fell Township, Lackawanna County:

- total production in tons of coal, 20,856.13
- 106 persons employed there
- 10 horses and mules in service there

On Tuesday, December 29, 1885, James Moran of Pike Street, Carbondale, was seriously injured at the Brennan colliery by a fall of rock from the roof. The following account of the accident was published in the *Carbondale Leader* of January 1, 1886:

“Another Mine Accident. / James Moran, of Pike-st., a miner at the Brennan colliery near the Northwest Coal Company’s mines, was seriously injured while at work on Tuesday by a fall of rock from the roof. His back and head suffered dangerous wounds. It is thought, however, that he will recover. He was the only one working near the place of the accident at the time it occurred.” (*Carbondale Leader*, January 1, 1886, p.4)

1824

Buffalo Colliery

The Buffalo Colliery was located near Richmondale. From 1885 to 1889 it was known as the Russell B. A. J. Hoole, a coal dealer in Buffalo, NY, was the proprietor of this colliery, and he ran it until 1889. Coal from the colliery was shipped over the Erie Railroad. The total output at this colliery: 223,400 tons of coal.

See *Walsh*, p. 14 for names of persons killed at Buffalo Colliery over the years.

1825

Butler Coal Company Breaker

The new breaker of the Butler Coal Company began operations in 1881. In the September 9, 1881 issue of the *Carbondale Leader* we read:

“The machinery for the new breaker of the Butler Coal Company is now being put in position. Their work is progressing favorably and will soon be in running order.” (*Carbondale Leader*, September 9, 1881, p. 4)

Coal shipments, to the Western markets, from the new Butler Coal Company colliery, on Tannery Road, were begun in October 1881. In the *Carbondale Leader* of October 21, 1881, we read:

“The Butler Coal Company have commenced taking out and shipping coal from their new colliery on Tannery road. They expect to increase the quantity of shipments as time advances, up to the full capacity of their works. Their coal will be sent to Western markets.” (*Carbondale Leader*, October 21, 1881, p. 4)

The coal mined in Watkins & Williams mine was processed at the new Butler Coal Company breaker. On November 8, 1881, a fall of roof took place in Watkins & Williams' mine and trapped, underground John R. Price and Daniel M. Davis, who were ultimately rescued from the mine. Here is the account of that accident that was published in the November 11, 1881 issue of the *Carbondale Leader*:

"A MINE ROOF CAVES IN. / An accident which happened in Watkins & Williams' mine on Tuesday, which happily did not result in any loss of human life, aroused intense interest among our citizens on that day. A fall of roof in the night previous hemmed in two men, John R. Price and Daniel M. Davis, who were working in the night shift. Their position was not discovered until six hours afterward. A force of men then went to work to extricate them, but this was not done until they had been fastened in underground for twenty hours. They were liberated finally, weak from want of pure air, but uninjured. A horse was buried in the fall and killed. / Watkins & Williams, who have charge of the Butler mine, have also been working for some years a vein of coal in what is known as the Clark mines. This is some distance south of the Butler opening. A year or two ago the breaker in which the coal from it was broken and screened was burned, and the coal had to be drawn in wagons to the Birkett breaker close at hand. A short time ago, after the completion of the large and commodious breaker erected by the Butler Coal Co., it was decided to run a 'heading' into the Clark mines from the north side, so as to take out the coal on that side and run it in mine cars to the Butler breaker. This heading has been run in the hill side nearly level with the ground for several hundred feet, but it has not yet pierced the old workings. It was in this last that the fall occurred, and the men Price and Davis were shut in. A little after six o'clock on Tuesday morning, Morgan Reese and William Davis went in on their way to their work in the heading, expecting to relieve Price and Davis, who had been working all night. They were, however, when they had nearly reached the face of the heading, stopped by a fall of roof which had taken place in the night. They shouted, and received an answer from Davis, who said he and Price were all right and in a safe place. They immediately came out and gave the alarm, and a force of men from Watkins & Williams' and the Butler mines were put actively to work to release the imprisoned men from their dangerous position. The rocks and dirt which had caved in were so piled that the glimmer of Davis' light showed through, and the figure of the horse could be made out as he stood immediately on the other side of the fall. The men first went to work on the inside. The progress of digging through went on finely for a time and it

was thought the work of getting the men free would be short. But a catastrophe occurred which put a more serious face on the matter. A second fall, no doubt hastened by the jarring of the men at work, tumbled in on the farther side of the first one, buried the horse, and completely choked the way. The head and shoulders of the horse were afterwards freed and a drink of water was given to him, but he died in a few hours. The attempt was then made under the superintendence of Mr. David Williams, of Watkins and Williams, to make an opening from the top of the ground where the fall had occurred. A shaft was also started thirty or forty feet beyond and sunk as fast as the limited number of men who could work together in it would allow. Several times at the opening above the fall, the men were on the point of success but a fresh slide of earth would roll into the hole and compel the diligent use of their shovels for another hour or two. At one time an opening was made through which Davis could be seen and talked to. Price was horse [sic] from a severe cold and could not talk. This led many to suppose that he was separated from his companion and probably injured. Crowds of people gathered around the scene during the day and evening and impeded the work by their curiosity and anxiety to get close to the gaping hole. The imprisoned miners were liberated about eight o'clock in the evening. The next day the hole through which they escaped was again filled up by a quantity of earth which fell in. / The heading they were in is narrow, the dimensions being seven feet in width and six and a half in height. There was about forty feet left between the fall and the face of the heading. The fall was about twenty feet in length. The shaft which was sunk from the top was carried within ten feet of the heading by the time the men were liberated and would have been finished by midnight. Price and Davis considered themselves perfectly safe except as regarded air supply, for they had sound roof over them. They propped the roof close to the fall with a car and what mine rails were at hand, then went to work with their picks to keep warm. The men were somewhat shaken by their rough experience, and Price was unwell at the time, but last night they both resumed work. / They make the following interesting statement of how they occupied themselves during the time they were shut in: 'The mines closed in about twelve o'clock Monday night. When we found ourselves shut in we used short rails in the manner of props as we had no other timber to use for propping the edge of the broken roof. We then brought a coal car from the face of the heading, placed it close to the fall, then took up the rack in the road and built a log pillar on top of the car with the road ties. All this was done in a very few minutes. By this time our lights went out, and having no oil we were obliged to struggle in the dark and do the best we could until we had relief from other sources. The second fall came about eleven o'clock Tuesday morning, at which time the horse was fastened, and soon afterward died. We were taken out about eight o'clock Tuesday evening. We return our heartfelt thanks to Messrs. Watkins & Williams and Mr. A. B. Nicol, Mine Superintendent, for the interest they took in our behalf, while we were closed in the mines. We cannot find words enough to express our feelings in thanks to all of our friends and neighbors who labored so hard to bring us from under the ground where we were so closely confined.' / The affair has fortunately not been fatal in its consequences, and we do not know that it can be attributed to carelessness on the part of any concerned, but it should have the effect of impressing on the minds of those responsible the need of very great precautions for the safety of the men employed in their works." (*Carbondale Leader*, November 11, 1881, p. 4)

The more than one hundred workers at the Butler Coal Company were working full time in March 1882. In the March 18, 1882 issue of the *Carbondale Advance*, we read:

“Miners employed by the Butler Coal Co., numbering upwards of one hundred, have full time. This is very gratifying but there are in other respects we understand some drawbacks.” (*Carbondale Advance*, March 18, 1882, p. 3)

The Butler colliery was located on Belmont Street, Carbondale. That we know from the article about the fire in the Napoleon Drennan house that was published in the February 24, 1883 issue of the *Carbondale Advance*, as follows:

“The alarm of fire on Tuesday afternoon was caused by the burning of a house belonging to Napoleon Drennan on Belmont street, near the Butler colliery. The dwelling was occupied by John Waltz and family, who saved but a few articles. . . ” (*Carbondale Advance*, February 24, 1883, p. 3)

The Butler Breaker was a well known landmark on Belmont Street. James Steel, who had a fine cow for sale in August 1887, gave his address in his for sale ad in *The Journal* of August 4, 1887 as “Belmont Street, near Butler Breaker”:

Valuable Cow for Sale. / A fine cow, half Jersey and half Alderney blood, four years old, is offered for sale at a Bargain. / James Steel. / Belmont Street, near Butler breaker.” (*The Journal*, August 4, 1887, p. 3)

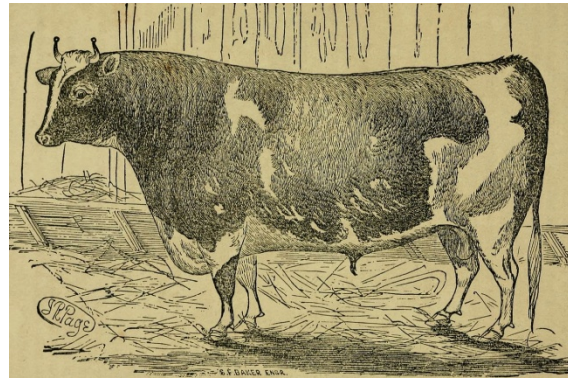
Alderney cattle are now extinct. The breed originated on the British Channel Island of Alderney. Pure-breed Alderneys were smaller, more slender boned animals than the cattle of the other Channel Islands.

Most of the pure-breed Alderney cattle were removed from the island to Guernsey in the summer of 1940, because the island was then occupied by the Germans, and it was difficult for the few remaining islanders to milk them.

On Guernsey, the Alderney cattle were interbred with local breeds. The few pure-breed Alderney cattle remaining on Alderney were killed and eaten by the Germans in 1944. In France, the Alderney was absorbed into the Normande breed.

Here are two representations of Alderney cattle from the nineteenth century:

Alderney Cattle

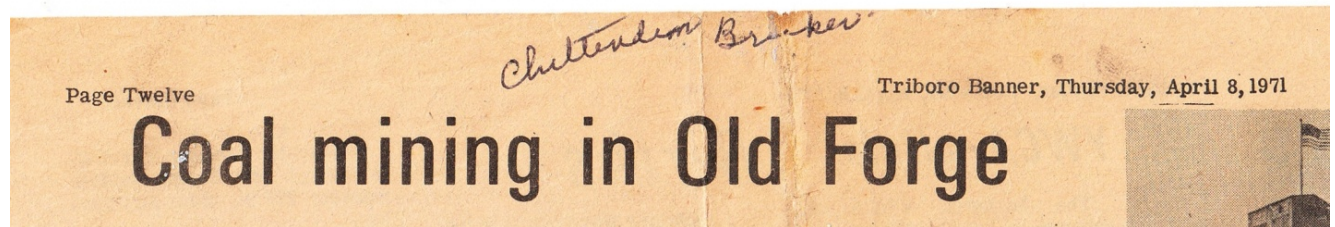


On August 17, 1892, Lizzie Stiles, whose husband Thomas was a teamster at the Butler Colliery, was arrested for keeping a disorderly house in “the upper end of the Belmont district” and of entertaining there men and women of disreputable character. Thomas Stiles refused to come to his wife’s assistance when informed of her arrest and was apparently glad to have his wife placed where she would keep sober for a time. Here is the account of this incident/arrest that was published in the *Carbondale Leader* of August 18, 1892:

“DISORDERLY HOUSE RAIDED. / The Keeper, Lizzie Stiles, Taken to the County Jail / A warrant was issued by Alderman Thompson yesterday for the arrest of Mrs. Thomas Stiles who was charged with keeping a disorderly house and entertaining men and women of disreputable character. The warrant was placed in the hands of Officer Moran and he with Chief McAndrew and Special Officer Campbell raided the place during the afternoon. Three women were arrested, but two young men who were in the house managed to escape. The house is in the upper end of the Belmont district and a number of complaints have been made at police headquarters against the woman who managed the place, but the complainants refused to become prosecutors. / The women were taken before Alderman Thompson and sufficient evidence was produced to warrant the court in holding Lizzie Stiles and she was directed to furnish bail in the sum of \$500. Failing to furnish the bond she was committed to the county jail to await the action of the next grand jury. The other women were discharged. / Mrs. Stiles spent last night in the city prison and was taken to Scranton this morning. She is the mother of three children, the youngest two years old, the oldest in her seventh year. Her husband is employed as teamster at the Butler colliery. He refused to come to his wife’s assistance when informed of the arrest and was apparently glad to have her placed where she would keep sober for a time.” (*Carbondale Leader*, August 18, 1892, p.4)

Carbon Hill Colliery, Old Forge

A newspaper article titled "Coal mining in Old Forge" (*Triboro Banner*, Thursday, April 8, 1871, p. 12) came into the holdings of the Carbondale Historical Society in October 2016. In addition to interesting material on the early anthracite coal activities in the Lackawanna and Wyoming Valleys (with which the article begins), the article contains very interesting material on the first anthracite mining activities in Old Forge, which took place at the Carbon Hill Colliery of the Glenwood Coal Company. Here is that newspaper article:



Dr. William H. Smith and his brother-in-law, James Sutton, operated a forge on the Lackawanna River from 1789 to 1815. This was the first operation of its kind in the Lackawanna Valley. This is the forge after which the name *Old Forge* is derived.

In 1798 a bushel of coal was sent to a gunsmith in Nazareth, Pa., but after trying it for several days, he grew so impatient at his long fruitless efforts that he indignantly threw it into the street, saying to a Mr. Henry of whom he had purchased the coal:

"I can do nothing with your blackstones, and therefore I threw them out of my shop into the street; I can't make them burn. If you want any work done with them, you may do it yourself; everybody laughs at me for being such a fool as to try to make stones burn, and they say that you must be a fool for bringing them to Nazareth."

→ This was but six years after Dr. William H. Smith made the first purchase of land with the right to mine coal in the Lackawanna-Wyoming area. Dr. Smith, with his brother-in-law, James Sutton, operated a forge on the Lackawanna from 1789 to 1815. This forge, from which Old Forge derived its name, was the first operation of this kind in the Lackawanna Valley.

In 1799 anthracite was found in Carbondale, but it wasn't until 1808 that anthracite mining started on the basis it is known as of today. It was also during this year that anthracite was introduced as a household fuel.

Judge Jesse Fell wrote that on February 11, 1808, he "made the experiment of burning the common stone-coal of the valley in a grate, in a common fireplace in my house, and find it will answer the purpose of fuel, making a clearer and better fire, at less expense, than burning wood in the common way."

In 1812 the first few arkloads of coal shipped to Philadelphia were purchased by city authorities, placed under the boiler of an engine, where it "put out the fire, while the remainder of the coal was broken up and used for graveling the streets."

However, it was the steam railway that ushered in a new epoch of transportation which aided the rapid development of the anthracite industry.

In 1826, the state legislature authorized the Delaware and Hudson Canal Co. to construct and maintain a railroad for the purpose of hauling anthracite from the mines to its canal and two years later the first steam railroad was completed from Carbondale to Honesdale and the Stourbridge Lion, a steam engine imported from England and sent to Honesdale, made its trial trip using anthracite as a fuel to haul anthracite.

"The first anthracite mining operation in Old Forge was at the Carbon Hill Colliery of the Glenwood Coal Company. . ."

→ The first anthracite mining operation in Old Forge was at the Carbon Hill Colliery of the Glenwood Coal Company. The colliery was located near the Lackawanna and Bloomsburg Division of the D.L. and W. Railroad, which extended from

The Chittenden Breaker was the first breaker in Old Forge. Two hundred and fifty tons of coal were prepared there daily.

the Italian Cemetery near Moosic Road to River Street (Goose Alley).

Two shafts and a tunnel were used to take the coal out of the mines for sizing to the Chittenden Breaker, the first in Old Forge.

At the Chittenden, 250 tons of coal were prepared daily and shipped to outside markets. There were 25 boys whose ages ranged from 8 to 12 years, employed as slate pickers in this breaker.

Not until long after 1800 did Old Forge show any real tendency to develop the mineral resources. Two steps were necessary before mining could be inaugurated: 1) Some cheap method had to be devised to get the coal to market, and, 2) People had to learn how to use it once it was transported.

Coal was shipped in the beginning by canal. Thus Carbondale, which was favorably situated, saw the earliest development of coal in the region. To reach the Philadelphia market, coal was hauled first to Honesdale by horse-drawn cart, then by canal boats to the Delaware River.

The Lackawanna and Bloomsburg Railroad was the first to traverse Old Forge when railways rapidly supplanted the earlier methods of transportation. Mining operations developed in Old Forge shortly thereafter. So the peaceful agricultural community, settled 75 years earlier by New Englanders, witnessed the beginning of a transitional period.

Boom conditions were observable and land changed hands constantly...In 1887 coal tract ownership was held by the large corporations.

Starting in 1868 when the Carbon Hill Colliery began operations in Old Forge, boys, who reached the age of 8 or 9 years, and who scarcely had the energy to lift their lunch

boxes, were employed at the mines. When the mine car was filled with coal, they hitched the mules to the car and started on their trip out of the mines. They also had to see that the miner had enough empty cars for his shift.

A number of the boys worked as nippers. Their duties were to open and close the large mine doors which controlled the supply of suitable air for the miners at work in their chambers. They had to work ten hours a day, and in some cases fell asleep on the job. Serious injuries to workers resulted when boys were inattentive at these posts.

In the breakers, the boys were employed as slate pickers. The mine and breaker-run coal came down chutes. The boys held the impure coal back with their feet so that they could pick out the slate and rock. This was a "backbreaking" job.

Bitter experience taught the miners the value of a strong labor union. The miners suffered a quarter century of hardships. They were forced to accept minimum wages. Companies practiced minimum benefits for workers by "docking" for impurities, by a method which the miner had no chance to see how it was done. The "company store" abuses did not help matters much for the workers.

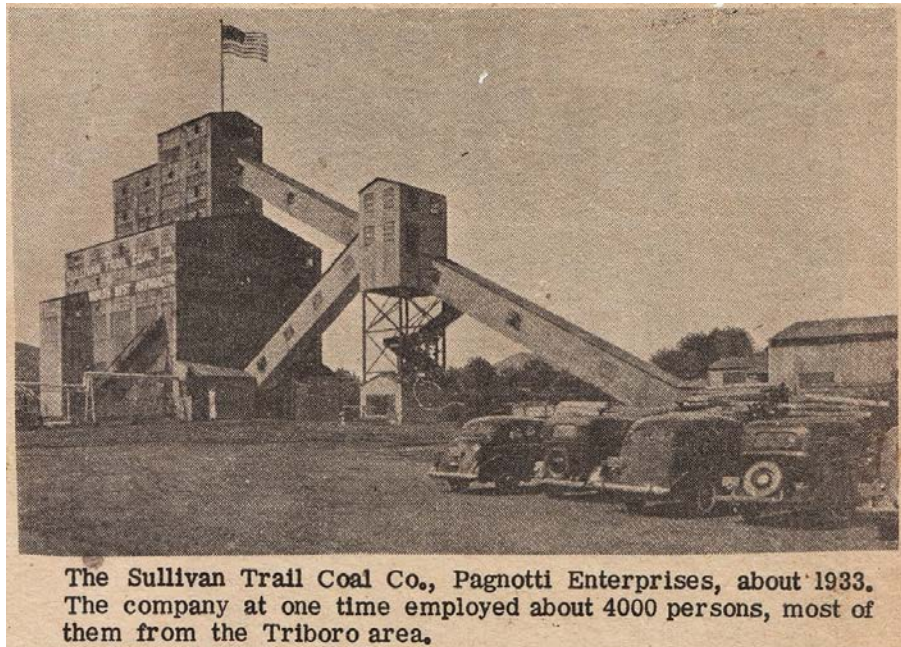
Almost all the sections of Old Forge developed near mine workings during the period of the township, 1871-1899. At the time of the incorporation of the borough, three post offices served it: Coyne, Old Forge, and Rendham.

Each name of a section had its own peculiar significance, the Rendham Section derives its name for Rendham, a town in Sussex, England, where John Jermyn, a coal operator, was born. Sibley was named after the brother-in-law of Judge McClure by the name of Sibley.

Nippers: The boys who opened and closed the large mine doors which controlled the supply of suitable air for the miners at work in their chambers.

"The Lackawanna and Bloomsburg Railroad was the first to traverse Old Forge when railways rapidly supplanted the earlier methods of transportation."

When Old Forge was incorporated as a borough, three post offices served it: Coyne, Old Forge, and Rendham.



1827

Carbondale Coal Company Breaker

On the *Map of the City of Carbondale Lackawanna County, Pennsylvania 1909, From Actual Surveys By and Under the Direction of George William Tappan*, on the property back of/to the south of the New Catholic Cemetery at the south end of Park Street there is a breaker identified as the "Carbondale Coal Co. Breaker."

The Carbondale Coal Company, we read in the *Carbondale Transcript and Lackawanna Journal*, February 8, 1856, p. 2, was "the first private enterprise of the kind in our vicinity." The company, which purchased 400 acres of coal lands immediately below the city of Carbondale, will sink a shaft immediately and prepare for a business of 100,000 tons a year. The officers and managers of this company in 1856 were all leading citizens of the City of Carbondale: Orrin Whitmore, President; Thomas Gillespie, Treasurer; Lewis Jones, Secretary. Managers, D. N. Lathrope, H. S. Pierce, Orrin Whitmore, John S. Law, and Charles B. Campbell. About this new company, we read the following in the *Carbondale Transcript and Lackawanna Journal*, February 8, 1856, p. 2;

“Carbondale Coal Company. / This company recently formed under the general mining law, has purchased some 400 acres of Coal lands immediately below this city—all in one body,—and will be understand sink a shaft immediately and prepare for a business of 100,000 tons per year. The lands belonging to the Company are known as the north half of the tract in the warrantee name of ‘James Rider,’ the farms known as the ‘Morgan’ and the ‘Depew’ Farms. The works of the Company will be nearly opposite the residence of Sam’l R. Meredith, Esq., and we are assured will be prosecuted with all vigor. The coal will be sent east from here, whether by the Delaware & Hudson railroad, or by the new Lackawanna & Lanesboro’ road—the charter for which has just been obtained, we are unable to say. We hail this, the first private enterprise of the kind in our vicinity [emphasis added], with a hearty welcome, as an earnest of others soon to follow. / The officers are, Orrin Whitmore, President; Thomas Gillespie, Treasurer; Lewis Jones, Secretary. Managers, D. N. Lathrope, H. S. Pierce, Orrin Whitmore, John S. Law, and Charles B. Campbell. Incidentally, we hear of other enterprises, not yet fully matured, to be commenced below this in the valley.” (*Carbondale Transcript and Lackawanna Journal*, February 8, 1856, p. 2)

In late April 1856, the Lackawanna & Lanesboro Railroad, we learn from an article in the April 25, 1856 issue of the *Carbondale Transcript and Lackawanna Journal*, was boring, on the west side of the Plank-Road, preparatory to sinking a shaft near the cottage of S. R. Meredith. Here is that article:

"The Lackawanna Railroad company are boring, preparatory to sinking a shaft, on the west side of the Plank-Road, near the cottage of S. R. Meredith Esq." (*Carbondale Transcript and Lackawanna Journal*, April 25, 1856, p. 2)

1828

Clark’s Mines Breaker

On May 27, 1877, a few minutes before twelve o’clock, it was discovered that the coal breaker on Belmont Street at the entrance to the Clark mines was on fire. The fire, which was clearly the work of an incendiary, destroyed the breaker, which was built around 1862. The mines and breaker are owned by Messrs. J. E. and W. W. Watt, John Stuart, and Daniel Scurry. They were leased, about 1875, by Messrs. Horan & Haley, who bound themselves to keep the breaker in repair. Here is the account of the fire what was published in the *Carbondale Leader* of June 2, 1877:

"DESRUCTION OF AN OLD COAL BREAKER BY FIRE. / A very few minutes before twelve o'clock on Sunday night fire was discovered in the coal breaker on Belmont street at the entrance to the Clark mines. The alarm was sounded for the First Ward, and the firemen promptly responded. By the time they reached the scene the old structure was completely enveloped in flames, and it was found to be useless to apply any water to the burning mass of dry old timber. The watchman at Davis's engine supposed that some of the company's property was

on fire, and he therefore blew the chimes and called out the employes. There is said to have been no work done in the breaker for several weeks past, and of course there had been no fire in the furnace or building for a number of weeks previous to the time when the blaze issued from it on Sunday night. It is therefore certain that some one set fire to the breaker. Whether it was done on purpose to keep up with the lower section of town, or whether the intention of the incendiary was to make the First Ward bear a portion of the periodical conflagrations, could not be ascertained with any degree of certainty. The breaker was built at least fifteen years ago and was pretty well worn out. The mines and breaker are owned by Messrs. J. E. and W. W. Watt, John Stuart, and Daniel Scurry. They were leased a couple of years ago or thereabouts by Messrs. Horan & Haley, who bound themselves to keep the breaker in repair. There being no demand for coal at present the lessees were obliged to suspend mining for a while. The coal there mined has mostly been sold to the local trade, but at times small quantities have been shipped to points along the Erie Railway. The breaker was insured in Mr. Thos. R. Lathrope's agency for eight hundred dollars. Some idiot started the rumor on Monday that there was an insurance on it of \$30,000, which was altogether too big a lie for any one but an idiot to invent; yet there are people who peddled the rumor as though they had some faith in its truthfulness. The breaker will probably be rebuilt in the course of a year." (*Carbondale Leader*, June 2, 1877, p. 3)

In mid-December 1881, Watkins & Williams began working their old breaker at Clark's Mines. By means of an ad in the December 17, 1881 issue of the *Carbondale Advance*, they offered for sale to all their old customers "a first class quality of coal." Here is that ad/notice:

"Watkins & Williams commenced working their old breaker at Clark's mines this week for town and country trade, and would be pleased to see all their old customers that want a first-class quality of coal. Orders received at Pascoe & Scurry's, Moses & Scurry's, John Watt & Sons', and at the mines." (*Carbondale Advance*, December 17, 1881, p. 3)

1829

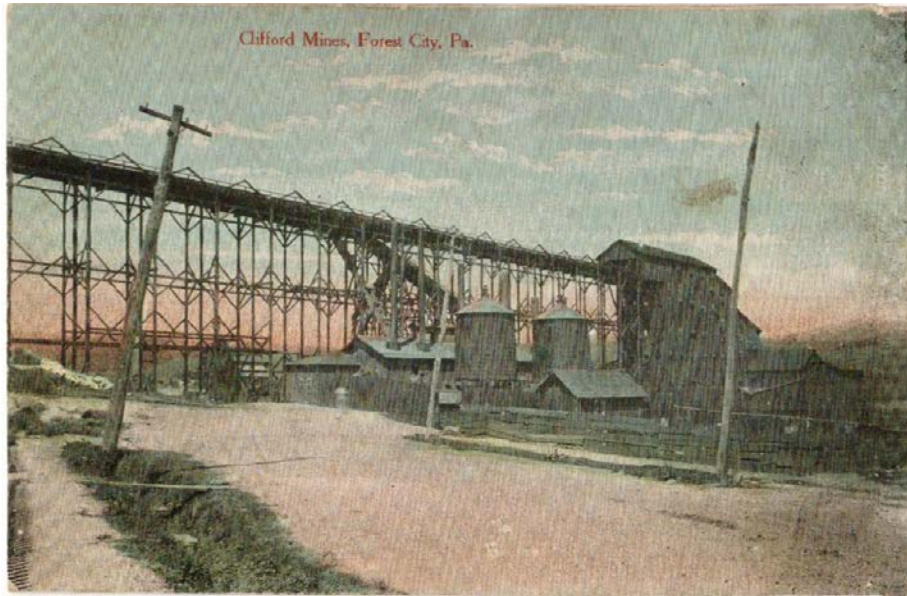
Clifford Breaker

The Clifford breaker in Forest City, which opened in 1887, was one of five collieries owned by the Hillside Coal and Iron Company in 1897. They were: Glenwood, Erie, Keystone, Forest City, and Clifford.

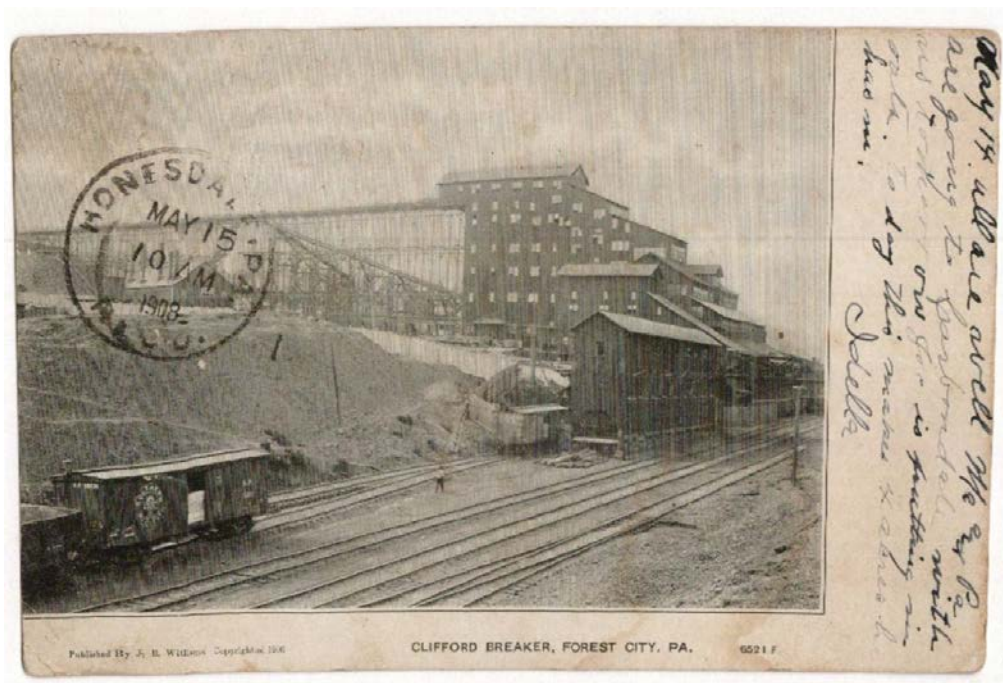
The Clifford Breaker produced 359,000 tons of coal in its peak year, 1908. The Clifford Breaker was consolidated ultimately with Forest City Colliery and closed in 1909.

See *Walsh*, p. 14, for a listing of persons killed at the Clifford Breaker in the period 1887-1909.

The originals of the photographs of the Clifford Mines and Breaker given below are in the holdings of the Forest City Historical Society. These photographs were made available for publication here by Peggy Brager on May 31, 2017:



Clifford Mines, Forest City, Pa



Clifford Breaker, Forest City, PA.

1830

Clinton Breaker

The Clinton Breaker was located in Vandling. It was shut down in 1934. Its peak production year was 1921, when 619,000 tons of coal were produced; total output of the breaker, 15,334,000 tons. In the 1920s no less than 700 men and boys worked there; 73 men lost their lives at the Clinton Breaker. There was also a Clinton washery, that produced 753,300 tons of coal during its existence.

The Clinton Breaker is listed as a D&H breaker in the 1898 First District mine report.

See *Walsh*, pp. 15-16, for fatal accidents at Clinton Colliery.

Here is a photograph of the Clinton Breaker from the Hudson Coal booklet, 1929:



Clinton Breaker

In 1934 the Hudson Coal Company shut down its Clinton Colliery in Vandling and removed the pumps, which resulted in the mines at the Northwest Colliery on Upper Jefferson Street in Simpson being flooded.

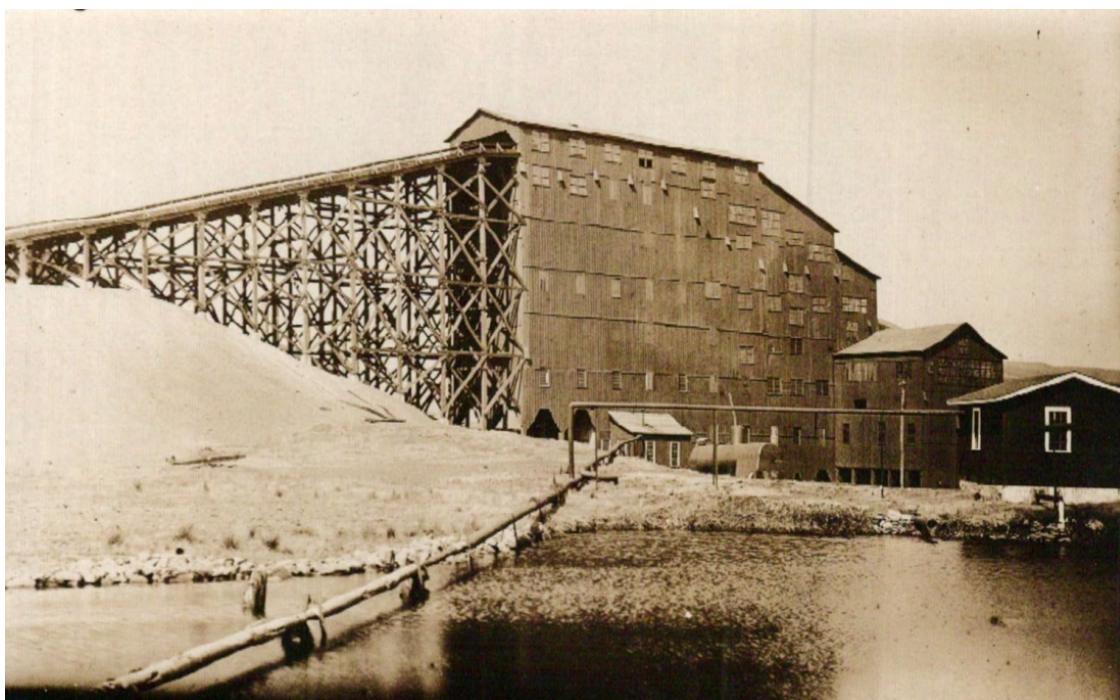
On July 25, 1892, two boys who worked at the Clinton Colliery, Ali Simpson and Frank Monroe, got into an argument while standing on the high trestling running from the breaker to the culm dump. The argument came to an end when Simpson pushed Monroe off the trestling. In the fall of thirty feet, Monroe broke his hip and one of his wrists was shattered so badly that the doctors say it will be useless for life. Simpson was arrested. Here is the account of this incident that was published in the *Carbondale Leader* of July 26, 1892:

“HEAD FIRST FROM A TRESTLE / A Boy’s Terrible Fall for Which Another Boy is to Blame. / Ali Simpson, a boy residing in Clintonville, the mining village between this place and Forest City, was arrested yesterday afternoon on a serious charge made by the father of Frank Monroe, of the same place. Both boys work at the Delaware & Hudson colliery. One day last week they got into a wordy altercation while standing on the high trestling running from the breaker to the culm dump, which was abruptly terminated by Simpson pushing Monroe overboard, head first down to the ground a distance of full thirty feet. / It is a wonder that the Monroe boy’s neck was not broken, but he escaped with injuries that are not much better. His hip was broken and one of his wrists was shattered so badly that the doctors say it will be useless for life. He now lies in a serious condition and suffers greatly, while it is by no means certain that he will recover. That he survived his terrible fall is considered little short of a miracle by those who saw it. / Simpson was taken before Alderman Baker who bound him over to court in the sum of \$500, H. Sahm, of this city, going his bail. The boy’s father has had an unusual amount of trouble in the past year and much sympathy is expressed for him in his latest trial. His wife is confined to bed by illness, and another son has been sick on his back for ten weeks with spinal trouble.” (*Carbondale Leader*, July 26, 1892, p. 4)

The originals of the photographs of the Clinton Breaker given below are all in the holdings of the Forest City Historical Society. These photographs were made available for publication here by Peggy Brager on May 31, 2017:



Clinton Breaker, Forest City, Pa.



Clinton Breaker, Forest City, Pa.



Clinton Breaker, Forest City, Pa.



Clinton Breaker, Forest City, Pa.



Clinton Breaker, Forest City, Pa.

Clinton Falls colliery was located in Browndale. See *Walsh*, p. 15, for fatal accidents at Clinton Falls Colliery.

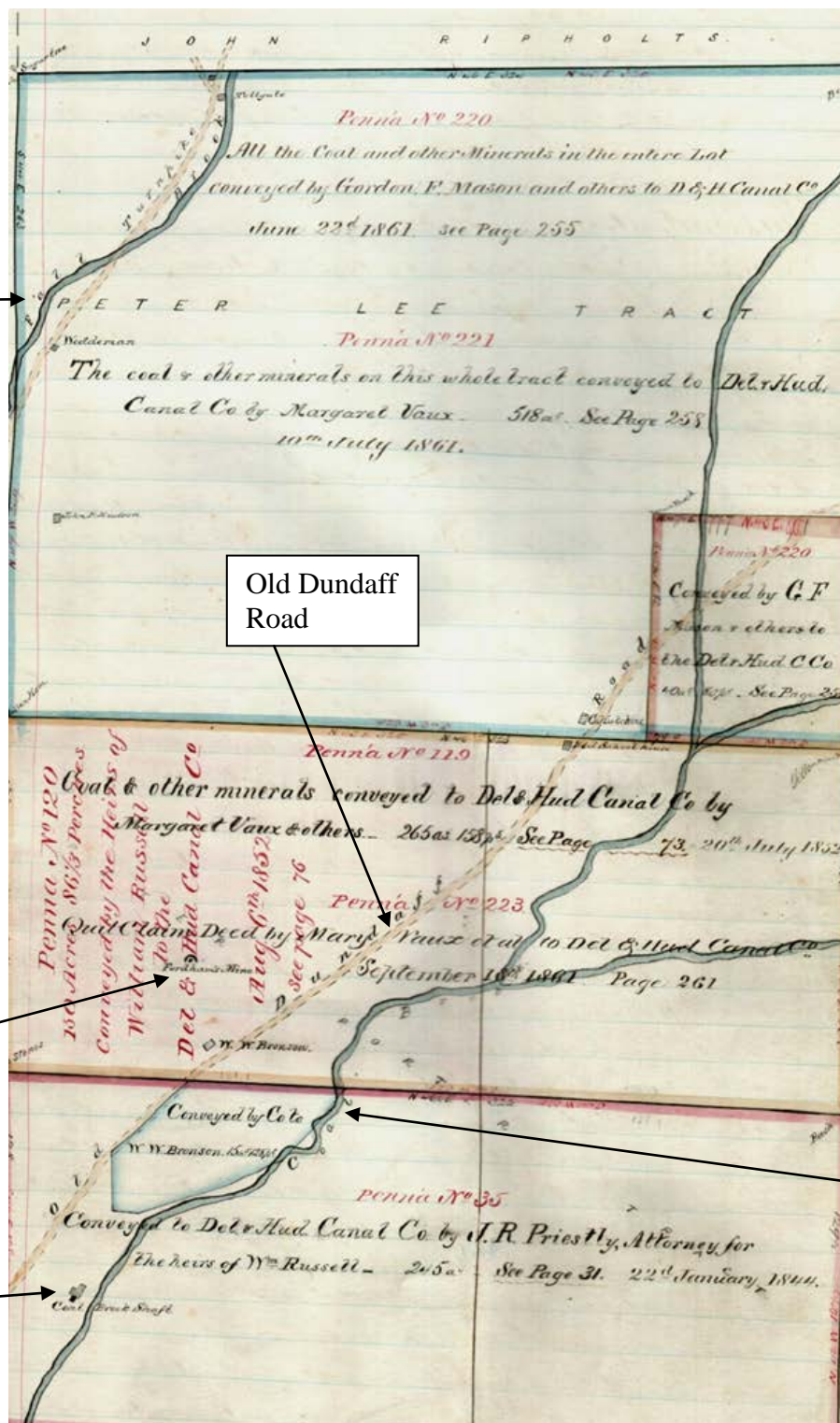
1831

Coal Brook Breaker

Coal Brook Breaker was a D&H breaker. It was erected in 1867, and in 1880 it was the largest breaker in the United States. In 1880, we read the following about Coal Brook breaker:

"Coal Brook breaker, just above the depots of the railroads in this city, was erected in 1867, and is the largest in the United States. It has a capacity of 1,400 tons per day. It has no rolls, and the coal is separated by screens, the finer coal going to the Rackett Brook breaker." (p. 447)

The Coal Brook and the Coal Brook Shaft (as well as Fordham's Mine) are shown on a map on page 33 of the *D. & H. Deed Book – Luzerne*. The map illustrates the deed, pp. 31-32, dated January 22, 1844, between Joseph R. Priestly Atty in fact and The Delaware & Hudson Canal Company Here is that map:



Fall
Brook

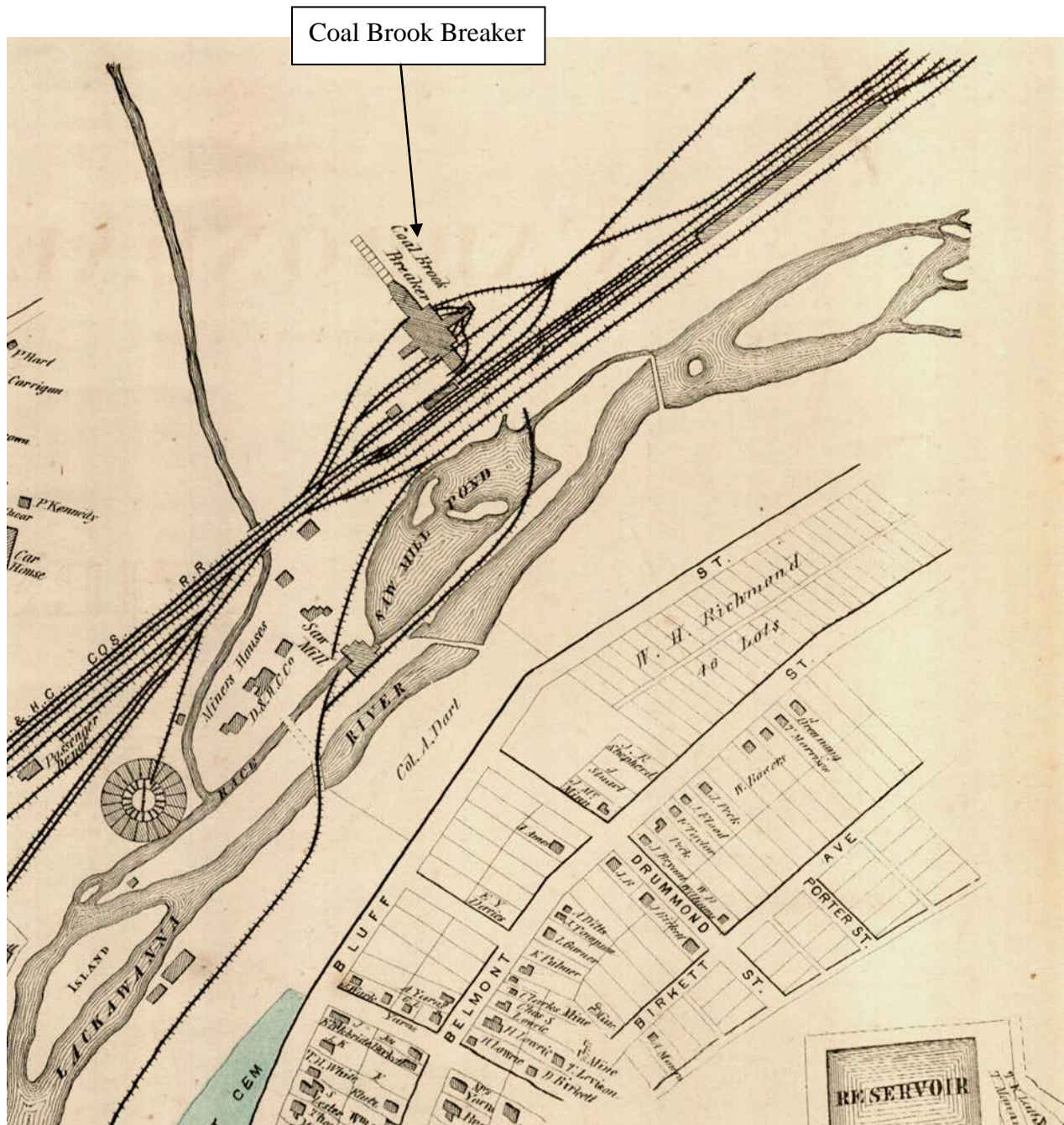
Old Dundaff
Road

Fordham's
Mine

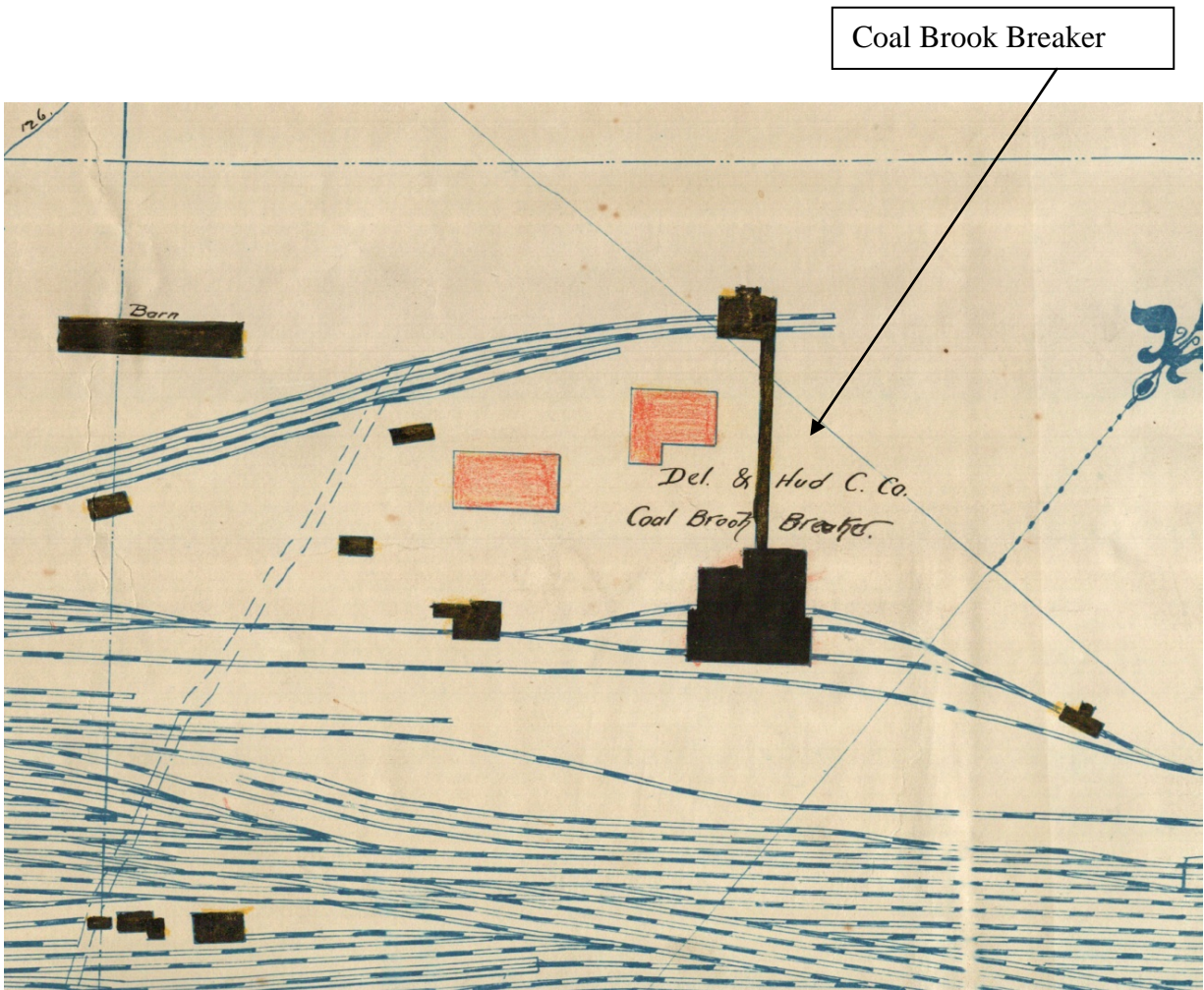
Coal
Brook
Shaft

Coal
Brook

The Coal Brook Breaker, at the north end of the Carbondale D&H yard, is shown on the detail given below from the 1873 *D. G. Beers Luzerne County/Carbondale map*:



The Coal Brook Breaker, and the tracks leading into the breaker, are shown on the detail of *Map of the City of Carbondale Lackawanna County, Pennsylvania 1909. From Actual Surveys By and Under the Direction of George William Tappan, Scranton, PA, October 18, 1909.*



One wonders if the “Coalbrook” Breaker was not originally called the “Cold Brook” Breaker. There were “Cold Brook mines.” In the article “Reduction” (*Carbondale Leader*, June 28, 1873, p. 3) we read: “. . . business ought to be much better in this city than it was last summer when the Cold Brook mines were all idle for the three months of June, July, and August. . .”

In 1876, the Coal Brook mines in Carbondale produced 1,000 tons of coal per day, Five hundred men and boys worked there in 1876. In the *Carbondale Advance* of February 26, 1876, we read:

“We understand work has been resumed in the Coal Brook mines in this city, on three-quarter time. The mine has a capacity for producing 1,000 tons of coal per day, and gives employment to five hundred men and boys.” (*Carbondale Advance*, February 26, 1876, p. 3)

Here is the Delaware and Hudson Canal Company section (p. 165) of Table No. 7 of the *1877 Mine Inspectors Reports*, in which precise data are reported on the collieries owned and operated by the D&H at that time.

Delaware and Hudson Canal Company

NAME OF COLLIERY.	SHAFTS.					SURFACE SLOPES.				UNDERGROUND SLOPES.				Total depth of mines in feet.	ELEVATION.		TOTAL OPEN'GS.			
	Number of.	Length in feet.	Width in feet.	Depth in feet.	Elevation of head ab. tide-water, in feet.	Number of.	Length in feet.	Vertical depth in feet.	Elevation of head ab. tide-water, in feet.	Number of.	Length in feet.	Vertical depth in feet.	Elevation of head ab. tide-water, in feet.		Of bottom above tide-water, in feet.	Of bottom below tide-water, in feet.	Shafts.	Slopes.	Drifts and tunnels.	Number of coal breakers.
Von Storch slope,	2	30	10	540	1,177	1	225	..	..	1	350	..	..	540	560	..	2	1	..	1
Leggett's Creek shaft,	2	24	10	250	789	..	..	..	..	1	300	15	449	355	434	..	2	..	..	1
Marvine shaft,	1	41	10	340	742	..	..	..	..	..	..	..	..	330	412	..	1	..	..	1
Eddy Creek shaft,	2	27	10	408	782	..	..	..	..	1	450	..	..	408	377	..	2	..	..	1
No. 1 and No. 2 colliery, Olyphant,*	2	23	10	388	785	..	..	..	..	..	..	..	..	..	..	..	..	2	..	1
Grassy Island shaft,	2	14	10	170	879	..	..	..	..	2	500	16	633	291	617	..	2	..	..	1
White Oak colliery,	2	24	10	275	908	..	..	..	..	1	300	..	..	..	..	..	..	..	..	1
Powderly colliery,*	2	9D	..	90	1,022	..	..	..	..	1	1,050	..	..	90	1,022	..	2	..	1	1
No. 1 shaft and W. B. tunnel,	1	7	7	30	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
No. 3 shaft,	2	11	11	89	998	1	450	65	998	..	..	..	..	80	906	..	1	1	1	1
Coal Brook colliery,	2	24	9	70	1,022	..	..	..	..	..	..	..	..	70	952	..	2	..	..	1
	3	10	10	30	1,073	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	3	8	8	25	..	..	..	..	..	2	275	..	..	..	..	..	..	..	..	..
	3	10	7	50	1,200	..	..	..	..	..	400	..	..	50	1,150	..	3	..	5	1
	3	8	8	40	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Totals,	17	..	..	..	..	2	..	..	..	8	..	..	..	..	..	..	17	2	9	10

Valuable research tools for learning about accidents in the anthracite mines and at the anthracite breakers are the annual *Reports of the Inspectors of Mines of the Anthracite Coal Regions of Pennsylvania*. From the *1877 Mine Inspector's Report*, we learn that on May 12, Rees Morgans, age 45, married with six children, was in a non-fatal accident (leg fearfully mangled by falling under culm car at the breaker, leg amputated) at the Coal Brook tunnel, Carbondale City.

We also learn the following information about the accident on July 6 at the Coal Brook tunnel in 1877 in which John Brennan, Age 51, was killed:

“... John Brennan, a miner, at the Coal Brook tunnel, Carbondale city, was killed July 6th, by a fall of roof. Brennan and his son were working together. They had no coal down, a blast which they had just fired having failed to do its work, There was considerable ‘falling roof’ projecting out from the face where the blast had been fired; and notwithstanding the repeated warnings of his son, and without examining the roof himself, he went under it to bar down some coal, to finish loading a car, which was standing in the chamber, and a large piece fell upon him, killing him almost instantly. He left a widow and eight children.” (*Reports of the Inspectors of Mines of the Anthracite Coal Regions of Pennsylvania*, 1877, p. 101).

On December 1, 1877, Michael Howard, age 52, married, with seven children, was also killed in the Coal Brook tunnel by a fall of roof.

“Michael Howard, a miner, at Coal Brook tunnel, Carbondale was instantly killed, December 1st, by a fall of roof. He had been trying to draw down the dangerous slab, but used a drill instead of a crowbar for that purpose, and as it is always the case, he was afraid to break or bend his drill, and did not exert his strength to bar it down. Several years ago, he was seriously injured by a fall of roof before, and a son, who was working with him at the time, was instantly killed by his side. However, it may have been then, it is beyond any doubt that he was killed now, through his own negligence entirely. The using of a drill instead of a crowbar to bar down rock is reckless in the extreme, and ought never to be permitted. Every miner should be compelled to provide himself with a good strong crowbar.” (*Reports of the Inspectors of Mines of the Anthracite Coal Regions of Pennsylvania*, 1877, p. 111).

For the year 1879, at the Coal Brook Colliery, we learn from Table No. 1, pp. 258-61, that there were no accidents resulting in death. That was not the case at other D&H collieries in 1879, and in reporting on those deaths at other D&H collieries, Inspector Jones makes two important statements about mine safety that should be noted in any discussion of the safety of miners, in any mine or breaker, D&H or otherwise, and those statements would not be out of place in the present discussion of Coal Brook Breaker:

1. Kerosene should not be used in mine lamps.
2. “Nearly every accident [in the anthracite mines or breakers] was the direct result of the most strange and unaccountable recklessness and carelessness, or disobedience of orders, on the part of the unfortunate victims themselves, or of those working near them.”

Lesson to be Learned: Don't Use Kerosene in Mine Lamps:

(1) At No. 3 shaft, in Carbondale City, we learn that on December 15, 1879, Mark Toolin, age 15, was "killed almost instantly by being crushed under mine cars." Here is the description of that accident that is given by William S. Jones, Inspector of Mines for the Eastern District in the 1879 *Reports of the Inspectors of Mines of the Anthracite Coal Regions of Pennsylvania* on page 211:

"Accident No. 57.—Mark Toolin, a driver, at the No. 3 shaft, Delaware and Hudson Canal Company, Carbondale City, was almost instantly killed, December 15, by being crushed by mine cars. This accident occurred on the main road, about five hundred yards from the foot of the shaft. At this point, a run commences which extends for seventy-five yards. The boy was found at the head of this run, under a forward car of a trip of four cars. The mode of letting cars down this run is as follows: On approaching the head of the run, the driver unhitches the mule, and throws the stretcher over its back, and the mule turns out to the side of the track, where it stands while the trip passes. The driver, in the mean time walks ahead of the trip a short distance, where he also allows the trip to pass, putting in the necessary sprags as it goes by. The boy then jumps on the hind end of the trip, and the mule follows. I have no doubt, but Toolin lost his light as his mule was turning off the track, and that in trying to stop the trip he fell before it, and got under the car where he was found. He was burning the 'World's Light,' and like Malia [Patrick Malia, a driver at the Leggett's Creek shaft, killed on October 3; see p. 210 in the 1879 report] and Schmaltz [Peter Schmaltz, a driver at the No. 8 shaft, Pennsylvania Coal Company, Hughestown borough; see 1879 report, pp. 209-210], I am afraid he lost his life by trying to save a few cents in the price of his oil. / As there was some trouble with the drivers on that day, most of them having refused to work, some were disposed to intimate that the boy had been interfered with by the strikers, hence, coroner Traverse impaneled a jury, and held an inquest, but no evidence of any foul play was elicited, and the jury returned a verdict of 'death by accident.' "

(2) We also learn that on October 3, 1879, another driver, Patrick Malia, was also killed by being crushed by mine cars. In the *Reports of the Inspectors of Mines*, 1879, p. 210, we read:

"Patrick Malia, a driver at the Leggett's Creek shaft, Delaware and Hudson Canal Company, Providence, was almost instantly killed, October 3, by being crushed by mine cars. This boy, again, was burning kerosene oil, known as the 'World's Light,' and was riding down a run on the bumper of the forward car of a trip, and against a strong current of air, and just as he was at the bottom of the run, his light went out, and his mules stopped suddenly, knocking him off the bumper and under the car. I was in the mine, and within a few yards of the place, when this accident happened. Hearing the poor boy's cries, I rushed to the spot, in company with Finlay Ross, the mine boss, and three of us lifted the forward end of the car, and held it up while the boy

was taken out from under it, the whole thing being done in a few seconds. I then examined the boy's injuries, and found that the wheel of the car had torn the lower region of his bowels in a horrible manner; and I was sure he would die before we could reach the head of the shaft with him, which proved to be the case. The death of this fine boy, as well as that of Peter Schmaltz [a driver, of German nationality, age 15, at the No. 8 shaft, Pennsylvania Coal Company, Hughestown; killed September 25], was undoubtedly caused by using kerosene. / Patrick Malia was of Irish nationality, sixteen years of age, a widow's son, whose father was also killed in the mines only a few years ago."

Mark Toolin and Patrick Malia, at the time they were killed in two different mines at two different times were using kerosene in their mine lamps. In his report for 1879 (pp. 225-227), Inspector Jones speaks out against the use of kerosene in mine lamps, as follows:

"Kerosene, 'The World's Light,' and Mixed Oils. / The twentieth section of the mine ventilation act makes it 'lawful for any inspector,' amongst other things, 'to inspect and to make inquiry in the mode of lighting and using lights in any coal mine and colliery in his district.' Now, outside of the matter of using naked lights or safety lamps, I look upon this as a very delicate subject. Its delicacy lies in the claim made by the employes, that the old fish oil and sperm oils are too costly, and that under the low rates of wages which they have been, and are still, receiving, they cannot afford to burn them. Hence, they have introduced kerosene, 'World's Light,' and other oils, and a mixture of those oils with fish and whale oils, into the mines, under the plea of economy. New styles of lamps have been invented to burn these oils, which are alleged to be safe, and provide as good a light as the old style lamps, burning the best quality of sperm oil, while it is asserted that there is a saving of fully one hundred per centum in the cost. The kerosene was the first oil introduced as a substitute for the old oils. This I have always looked upon as objectionable, and have always disapproved of its use, though, as yet, I have taken no decisive action with the view of prohibiting its use. It is well known that much of this oil that is sold for domestic use will not stand the legal fire test of one hundred and ten degrees Fahrenheit, and that many fatal accidents have occurred from its use; and knowing this, I cannot approve of its introduction into the mines. Instead of adding to the number of factors of danger in the mines, it should be our earnest effort to reduce them, and those who are employed in the mines should be the first ones to act in the matter; but I am sorry to say that the mass of them prefer taking the risk for the sake of a few shillings they may save in a year by the change. / Seeing that the raw kerosene was objectionable, because of its explosive properties, as well as for other reasons, another oil was introduced, which is nothing but kerosene still, but such as will stand an unusually high fire test. This is called 'The World's Light.' The sample tested by me stood a fire test of three hundred and twenty-five degrees Fahrenheit, and it was said that it could be furnished to the workmen at the retail price of twenty-five cents per gallon. So far as danger from explosions was concerned, I pronounced this oil non-explosive; and at the price named, I pronounced it cheaper than fish or whale oil. But after testing it thoroughly in other respects, I

find that there are many objections to its use in the mines. There is also an inferior oil of the same class, which, it is alleged, will stand a fire test of one hundred and fifty degrees Fahrenheit; that is used by a large number. And many use a mixture of fish oil and these several grades of kerosene. / Now, it is with great reluctance that I object to the use of these oils by the workmen, as I do not desire to add one cent to their expenses. But I am so positive that there is a danger in using them, that I feel constrained to protest against their use. There is more danger to some classes of workmen than to others, and I believe them to be injurious to the health of all. I find that the smoke generated by the burning of these oils is much greater than that arising from the burning of whale oil, and the odor of the smoke is far more nauseous and sickening, and they burn with such intensity, that the heat must affect the head very injuriously. In these directions they are injurious to all classes of workmen alike, but there are directions in which the burning of them are more dangerous to one class than to another. / The miners, for instance, are so reckless that they use these oils to make matches to fire blasts with, and I am certain that men have been injured by doing so, and one man at least has already been killed thereby. It may seem incredible that men will do this, but I know whereof I speak, for I have seen several of them do it, and have had them argue with me that there is no danger in doing it. But some admit that it is dangerous to make matches with, but add that the fact that miners make this misuse of them, is no reason for prohibiting their use altogether. But I think it is a very good reason when added to the other objections that we find to their use. If men will be so fearlessly reckless as to endanger their lives in this manner, they should be deprived of the opportunity by taking the means of self-destruction away from them. / Then there is another sense in which the burning of these oils is a great source of danger, and that is that the light goes out very easily. If the lamp is moved suddenly, or when traveling against a current of air, the light is extinguished, leaving the party depending upon it in total darkness. This makes the light a very unreliable and unsafe one, especially for drivers and runners, who are obliged to move rapidly, and often suddenly on main roads, and upon runs where the air-currents are strong. Whatever may be said in favor of using these oils by miners and laborers, I think that this last fact is more than sufficient in itself to convince all parties, that drivers, and runners at least should not use them. There is not a shadow of doubt in my mind, but three fine boys lost their lives, by losing their lights in this manner during the last year. Two of them lost their lights on runs, and fell under the cars, and were crushed to death, and the third's lamp and hat took fire, and while striving to put the fire out, he was caught between the cars and a close pillar, where he also was crushed to death. I refer to accidents No. 42 [Peter Schmaltz], No. 46 [Patrick Malia], and No. 57 [Mark Toolin], in table No. 1. / As I have already intimated, this seems to be a very delicate question, but I think the more intelligent class of workmen will agree with me, that the use of these oils should be prohibited. The light they produce is far from being as safe and healthy as that produced by the old oils, and the only thing that can be said in favor of them is, that they are cheaper. I most respectfully submit, therefore, that after trying the experiment with them for over a year's time, and after finding beyond a doubt, that the light which they provide, is not a safe and healthy one, every person should be willing to cast them aside, and return at once to the use of the old oils. It is very plain to me, that some action must be taken by somebody, in some way to suppress this

evil, and it would undoubtedly be the better way for the workmen themselves to do it. They have the remedy in their own hands."

Lesson to be Learned: Recklessness, Carelessness, and Disobedience Result in Fatal Accidents:

Inspector Jones, in addition, in the second paragraph of the cover letter of his report, dated March 6, 1880, to his Excellency Henry M. Hoyt, Governor of the Commonwealth of Pennsylvania, on the state of the mines in the Eastern District in 1879, explicitly states that "nearly every accident was the direct result of the most strange and unaccountable recklessness and carelessness, or disobedience of orders, on the part of the unfortunate victims themselves, or of those working near them." Here is that paragraph:

"I have compiled tables on accidents, as required by the twenty-second section of the aforesaid act [An act providing for the health and safety of persons employed in coal mines,' approved March 3, 1870]. From these tables it will appear that fifty-nine persons lost their lives during the year, and that one hundred and thirty-four were seriously injured and one hundred and thirty-two slightly injured. I have made such explanatory remarks on each fatal accident as my investigations warranted, from which it will be observed that the same complaint is made as in former years, that nearly every accident was the direct result of the most strange and unaccountable recklessness and carelessness, or disobedience of orders, on the part of the unfortunate victims themselves, or of those working near them [emphasis added]. The necessary discipline in the mines to reduce those accidents seems to be utterly unattainable and until we have additional legislation to create a code of rules for the government of mines, I have but little hope that the reform desired in this respect will ever be effected. . . "

More Accidents at Coal Brook Breaker:

From Table No. 2, pp. 262-67, we learn that in 1879 two serious, but non-fatal, accidents took place at the Coal Brook Colliery. On February 26, 1879, Michael McGarrah, age 38, was in a serious accident there: "Leg fractured below the knee, and arm slightly cut, by a fall of roof; leg amputated." On April 28, 1879, John Toolin, age 15, was in a serious accident at Coal Brook Colliery: "Head seriously injured by being crushed between cars while trying to couple them while in motion."

Two Toolin boys in Carbondale in serious accidents in 1879: John, age 15, seriously injured at Coal Brook Colliery on April 28; Mark, age 15, killed at No. 3 shaft on December 15. Were they twins? first cousins?

On Thursday, March 6, 1879, it was announced in the *Carbondale Advance*, that work at Coal Brook would be discontinued for the present:

"Suspending at Coal Brook / The unwelcome order was received here on Thursday to discontinue work at Coal Brook mines for the present." (*Carbondale Advance*, March 8, 1879, p. 3)

While trying to sprag a Gravity car at Coal Brook Breaker on Wednesday, July 20, 1881, William Kase had a finger torn off. Here is the account of the accident that was published in the *Carbondale Leader* of July 22, 1881:

"William Kase, a lad about 15 years of age, son of Augustus Kase, had a finger torn off while trying to sprag a gravity car, on Wednesday at Coal Brook Breaker. He picked up a mine car sprag and accidentally struck his hand in the wheel when he did the stick. The first finger was taken off near the hand with the exception of the tendon, which was not cut. The second finger was very much bruised. Drs. Bailey and Ottman sewed on the finger which was so nearly cut off, and it is possible it may yet be saved." (*Carbondale Leader*, July 22, 1881, p. 4)

The Coal Brook Colliery worked 236 ½ days in 1881, with an output of coal for the year at the colliery of 220,639.07 tons.

On Tuesday, January 6, 1885, James Clark, of No. 4, was seriously injured as he was firing a blast in the Coal Brook mines. Here is the accident report that was published in the *Carbondale Leader* of January 9, 1885:

"Mr. James Clark, of No. 4, was seriously injured in Coal Brook mines on Tuesday. He was firing a blast, and before he could get away it went off. He was fearfully burned about the face, and it was thought he would lose his eye-sight, but it is hoped this will not be the case. He is attended by Dr. Gillis, of Carbondale." (*Carbondale Leader*, January 9, 1885, p. 1)

Reports of Inspectors of Mines, 1887, Coal Brook Colliery:

p. 15: March 3: Patrick Martin, age 19, working in the Coal Brook Colliery in Carbondale City, was in a non-fatal accident (back slightly injured; fall of roof).

p. 15: April 2: Phillip Farrel, age 17, employed at Coal Brook Colliery, was in a non-fatal accident (left arm broken at wrist; caught by cars).

p. 19: November 21: Mike J. Quinn, age 41, employed at Coal Brook Colliery, was in a non-fatal accident (slightly injured, fall of coal).

p. 19: December 2: Charles Jourdan, age 43, employed at Coal Brook colliery, was in a non-fatal accident (foot slightly injured; a piece of coal rolled on it).

The Coalbrook mines and breaker were idle on March 20, 1899 in consequence of an alleged short weight given them by the weighmaster. Here is the account of this work stoppage that was published in the *Carbondale Leader* of March 20, 1899:

"MINERS STRIKE AT COALBROOK. / Will Not Work Until They Hear From Their Committee Set to Seek Redress from Supt. Rose. / Coalbrook mines and breaker are idle today, the miners awaiting the report of a committee sent to superintendent Rose of Scranton to adjust a grievance between the local officers of the company and the miners concerning the alleged short weight given them by the weighmaster. It was first rumored that the miners had struck because of the increase in the number of pounds of coal to be mined in order to get credit for a ton, but an interview with an official proves that this is untrue as the rate is still 2856, a rate that has been in force for the past twenty years or more at Coalbrook. / It is understood that dissatisfaction has prevailed among the miners over the docking system and alleged short weight for some time but this is the first organized effort to seek redress from the higher authorities that has been made. / Robert Carter general superintendent when seen by a LEADER representative said that the average weights for this month were the same as those of last. He neither verified nor denied the report that a committee had been sent to Mr. Rose, simply saying that he did not know why they should go to him. / At the Coalbrook office foreman Henry Carter said that the runners had been invited to examine the scales but had declined to do so. From what Mr. Carter said and from the general drift of other conversations on the subject, the supposition that the miners believe that someone has tampered with the scales, naturally arises. / Between three and four hundred men are idle on account of the trouble and in consequence the matter is regarded with a great deal of interest and many are awaiting with suspense the report of the committee sent to interview Mr. Rose." (*Carbondale Leader*, March 20, 1899, p. 5)

Following two days of not working in mid-March 1899, the miners at the Coalbrook mines and breaker went back to work, the problem there with the scales having been identified and corrected. In the *Carbondale Leader* of March 22, 1899, we read:

"MINERS AT WORK AGAIN. / It Is Said That the Fault Was in the Scales—Everything Lovely Now. / Coalbrook mines and breaker are again the scenes of activity after two days' idleness, pending the report of the committee sent to the authorities to adjust the difference between the local officials and the men. / Information as to the result of the investigation made

by the committee of the scales in use cannot be gained from any authoritative source. The leaders of the strike are extremely reticent about the matter and will not even give the names of the temporary officers in the newly formed union. It is rumored, however, that the scales were found to be badly at fault. According to the story that is going the rounds, the scale bar was lengthened for the weighmaster's convenience and no change was made in the other mechanism of the sale to balance the increased leverage obtained by lengthening the bar. Where the miner formerly received 4600 lbs to the car he lately received but 36000 / Whatever the fault was is adjusted and a long and disastrous strike averted, and it is well known the Delaware and Hudson company are exceedingly hard to approach when their employees attempt to dictate." (*Carbondale Leader*, March 22, 1899, p. 5)

A portion of the Coalbrook Breaker was blown down by the use of dynamite on the afternoon of May 20, 1899. Ultimately the entire breaker will be razed and a modern breaker erected on the site. Most interestingly, "many of Carbondale's camera fiends were on the scene" as the dynamiting took place on May 20. Sooner or later, it is to be hoped, a photograph that was taken that day by one of those "camera fiends" will surface. In the *Carbondale Leader* of May 20, 1899, we read the following about this project:

"BREAKER RAZED. / Portion of 'Coalbrook' Breaker Blown Down by the Use of Dynamite This Afternoon. / A disused part of the Coalbrook breaker was razed this afternoon at half-past two by sawing away the main supports and blowing out a few temporary props with dynamite. The portion taken down was virtually an elevated covered plane that was used until about two years ago to draw cars into the breaker from the 'Coalbrook side,' and was abandoned when a plane was run up the culm pile to where the cars from 'Wilson Creek' enter. / The guy ropes on one side of the structure were cut previous to the explosion and eight dynamite cartridges placed under the supports. The cartridges were exploded by electricity, blowing the props from their places but the building remained being held by the eight supports on the opposite side. Dynamite was placed under these and the structure fell to the ground. / Many of Carbondale's camera fiends were on the scene and with others made a crowd of at least three hundred people. It is understood that the entire breaker will be razed in this manner preparatory to or after the erection of a modern structure." (*Carbondale Leader*, May 20, 1899, p. 5)

When the new Coalbrook Breaker is completed, there will be a number of new mine openings from which coal will be fed into it. That we know from an article that was published in the *Carbondale Leader* of June 2, 1899:

"... The changes which the Delaware & Hudson company are making along their railroad lines are scarcely more extensive, however, than those contemplated and in progress in the mine department. The most important of these are now in the vicinity of Coalbrook breaker. When the

new and mammoth breaker on the flats is ready for operation there will be a number of new mine openings from which coal will be fed into it. / Along the east side of the knoll above the breaker two new openings have already been made. The opening near the Coughlin property was mentioned in the *Leader* some time ago. Several other slopes are to be driven in the immediate vicinity and connected with tracks leading to the new breaker. / A track leading around the knoll from the upper end of the big culm pile is already in position. A short plane will connect the new and old tracks. . .” (“More Changes in the D. & H.,” *Carbondale Leader*, June 2, 1899, p. 5)

The drivers, runners, and door tenders at the Coalbrook, Wilson Creek, and Lackawanna mines struck on August 25, 1899, pending an agreement on wages. On August 24, 1899, a meeting was held in McNulty’s arcade on the question of forming a junior mine workers’ union. We read the following about this wage dispute in the August 2, 1899 issue of the *Carbondale Leader*:

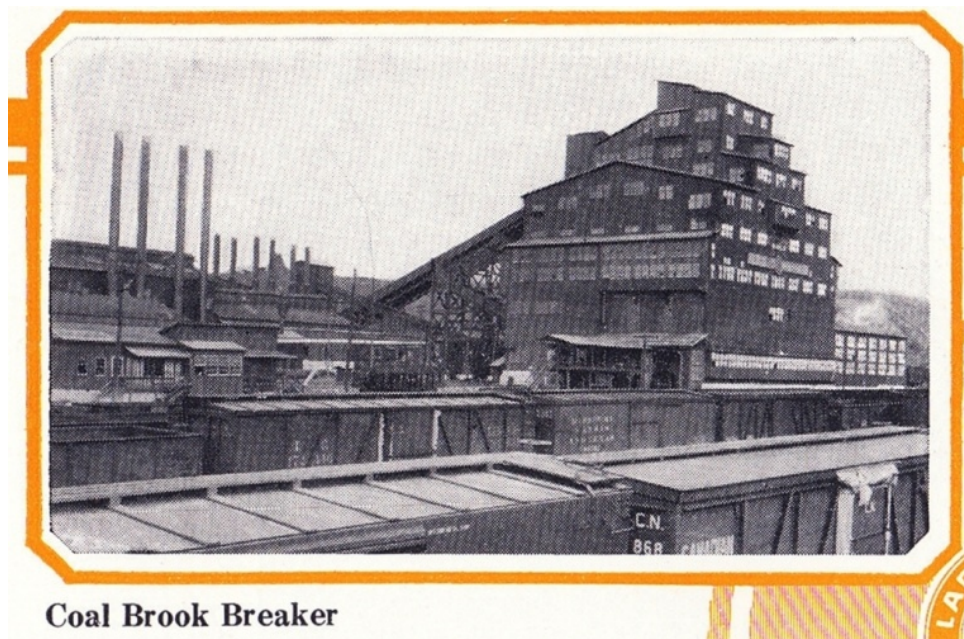
“STRIKERS STILL OUT. / Will Not Return Until Their Demands Are Granted—South Side May Go Out Also—Officials Will Not Talk. / This morning when the time to begin work at Coalbrook, Wilson Creek and Lackawanna mines came there was no one except the bosses, inspectors and a few miners but no one could go to work as the drivers, runners and door tenders are still out pending an agreement on the wage question. The strikers represent that while no one individual has had his wages cut, the scale has been reduced. They say that the older boys employed as drivers were placed at work as laborers, and the boys who took their places paid a lower figure per day. There were other positions where the wages were treated in like manner. It was virtually taking a man from a lower position, raising his wages a few cents and yet not making them as high as those of his predecessor thus reducing the scale without cutting anyone’s wages. This was done some six months ago. The old scale was: / Door tender, .73 / Leader \$1.05 / Station driver \$1.05 / Chamber driver \$1.38 / Runner \$1.47 / Sander .83 / The new scale is: / Door tender .60 / Leader .83 / Station driver .95 / Runners \$1.25 to 1.38 / A LEADER representative saw mine boss Scott today and he said that a number of the boys had interviewed him personally but he had not been approached by a body so far. Mr. Shearer who is Mr. Scott’s superior officer was seen by a LEADER man also. He is next to superintendent Rose in authority but would have nothing to say except that he knew nothing of the boys’ troubles whatever and did not wish his name mentioned in connection with the matter. / An inspector gave the information that it would not inconvenience the company any at present as the scarcity of cars made it possible to load at other collieries. The above is the situation on the upper side. / LOWER SIDE, TOO./ On the lower side the condition will soon be much the same, everything idle, the drivers having announced their intention to strike partly out of sympathy for the boys on the upper side and partly because of a cut in their wage scale a few weeks ago although they are paid much better than the Coalbrook employees. / At a meeting held in McNulty’s arcade last night the initial move was made to start a junior mine workers’ union and a committee was appointed to interview superintendent Rose and hear his decision. The boys will not return to work until their demands are granted, so they say.” (*Carbondale Leader*, August 25, 1899, p.5)

The abandonment by the Delaware and Hudson Company of “The Fan” on the west side of Carbondale caused, in August 1899, some adverse comment among the miners and the other men employed in the workings dependent upon the station for the supply of air so requisite in the mines. In the *Carbondale Leader* of August 16, 1899, we read the following on this question:

“AFFAIRS OF THE MINING WORLD. / Miners Complain of a Change in Air Pumping Stations. . . / The Delaware & Hudson company having found a cheaper means of forcing air into their mines than that employed at what is commonly termed ‘The Fan’ on the west side, that air pumping station has been abandoned and its abandonment has caused some adverse comment among the miners and other men employed in the workings dependent upon the station for the supply of air so requisite in the mines. It is understood that the new station situated at or near Coalbrook opening is not adequate and that the air does not reach certain portions of the workings. / The matter will be given consideration at the next meeting of the local miners’ union and if a feasible case can be made for presentation to higher authorities than the local officials it will probably be done. The idea of removing the fan to Coalbrook was in the saving gained in coal and its transportation for the engineers, the remote location of the west side station making it necessary to draw the fuel a long distance by wagon. / Now a pipe leading from the breaker boilers supplies the necessary power to operate the ventilating apparatus. . .” (*Carbondale Leader*, August 16, 1899, p. 5)

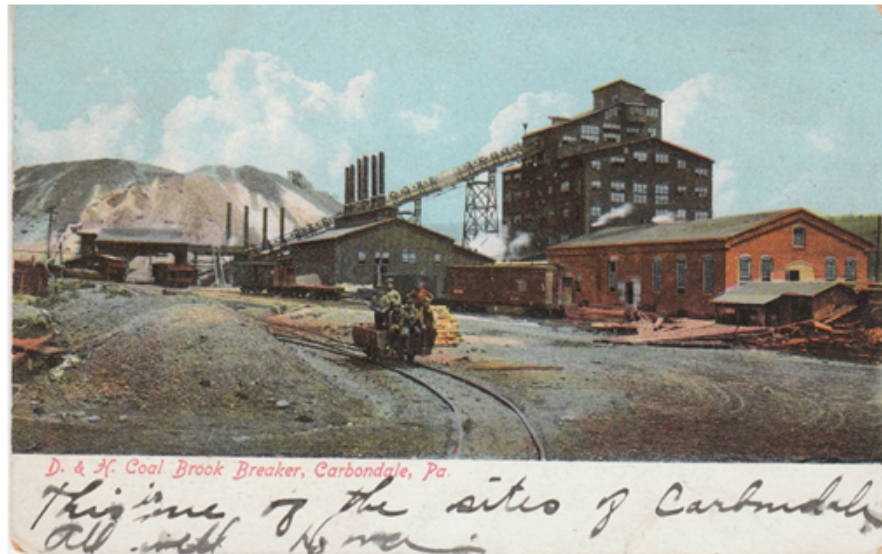
Many photographs of the Coal Brook Breaker exist. Here are some of those photographs:

Photo of Coal Brook Breaker in the Hudson Coal book, 1929:

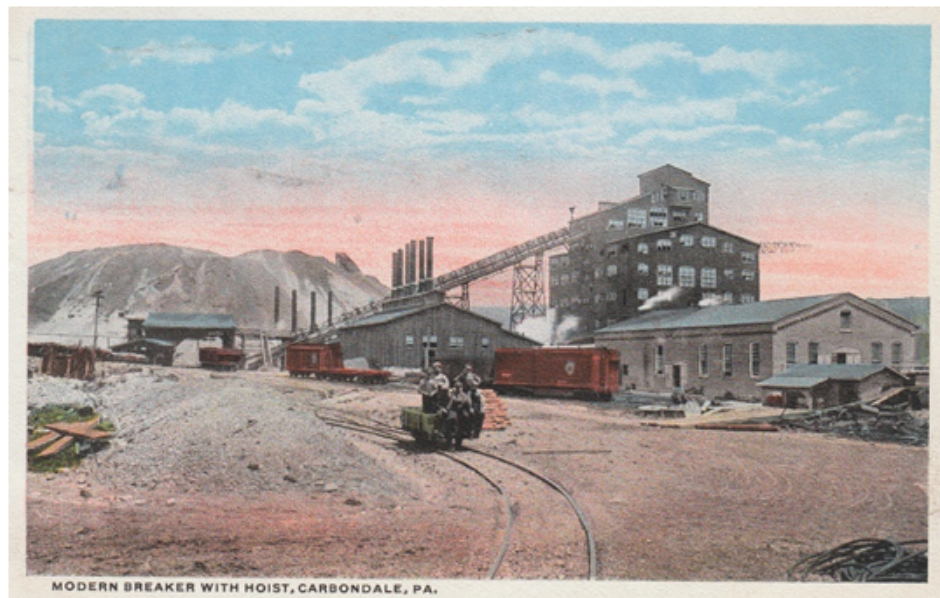


Coal Brook Breaker

Here is the same photograph of Coal Brook Breaker, in two different colorized versions:

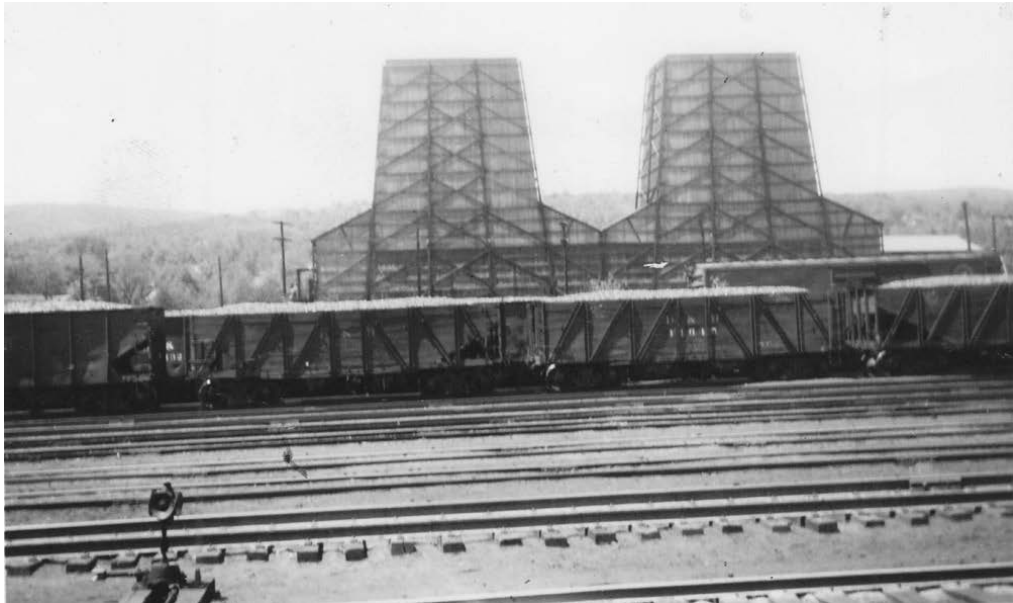


D. & H. Coal Brook Breaker, Carbondale, Pa.

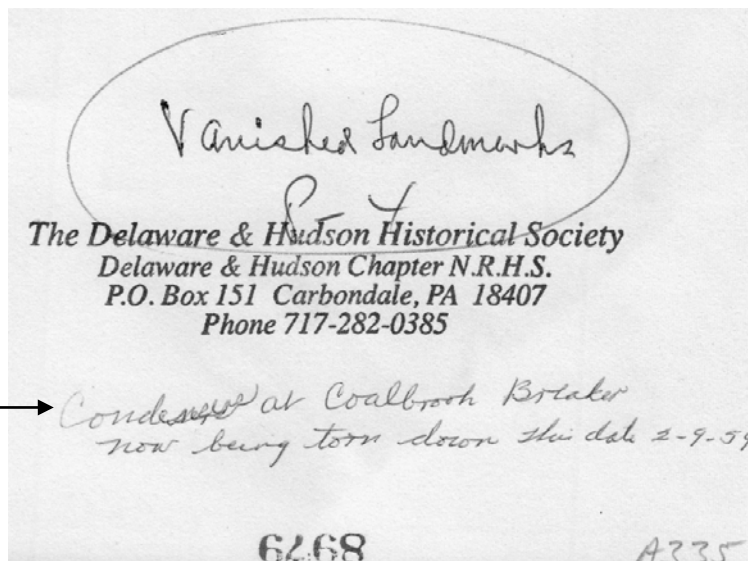


*Modern Breaker [Coal Brook] with Hoist, Carbondale,
PA*

Here is a good photograph of the condensers at Coal Brook Colliery. This photograph is in the collection of the Carbondale Historical Society.



Condensers were used to condense and collect the exhausted coal dust from a breaker so that the coal dust was not be expelled in clouds from the breaker to be blown about by the wind and scattered on the ground and buildings in the vicinity. From a handwritten note on the back of this photograph (see below) at the time that it was published in the *Carbondale News*, we know that these condensers were torn down on February 9, 1959. Here is a photograph of the back of the photograph shown above:’



“Condensers at Coal Brook Breaker now being torn down this date 2-9-59”

Coal Brook Colliery, Carbondale, PA. Photograph in the collection of the Carbondale D&H Transportation Museum.



Coal Brook Colliery, Carbondale, PA.

Three Coalbrook Colliery notes:

1. Upwards of 2,000 miners worked at the Coal Brook Breaker at one point in the history of the breaker. Operations were discontinued at Coal Brook, Carbondale, on March 12, 1954.
2. Coalbrook Colliery: Hudson Coal Company, the Lackawanna and the Wilson Creek tunnels were given up several years before 1954 and in 1954 were under operation by an independent contractor (Molinski Coal, Simpson).
3. In *The Delaware and Hudson Railroad Corporation / Pennsylvania Division / Time Table No. 33 / Effective Sunday, Sept. 25th, 1938 at 12:01 A.M. . . For the Government of Employees Only*, p. 18), we read:

A stop board is located at a point just north of the frog leading to Coal Brook Breaker tracks, Southward trains and engines will stop at this point and proceed only on proper hand signal, given either with a green flag by day or green lamp by night.

"Coal Brook Colliery / Hudson Coal Co." photo in the collection of the Carbondale Historical Society



Coal Brook Colliery / Hudson Coal Co.

Coal-Brook Breaker, Carbondale, PA. Post card in the collection of the Carbondale Historical Society.



Coal-Brook Breaker, Carbondale, PA.

Published in the *BLHS Bulletin* (April 2015, p. 4) is the following photograph, in the archives of the Carbondale D&H Transportation Museum, that was sent to the BLHS, at their request (the editor of the *BLHS Bulletin* saw it on the CHS&M webpage and asked to publish it in the *BLHS Bulletin*), with the following caption: "The D&H's Carbondale, Pa. yard, looking north, with Coal Brook Colliery at the left rear. D&H photo, courtesy Carbondale Historical Society."



This photograph of the Carbondale Yard and the Coal Brook Colliery (together with a number of rare and wonderful railroad and Carbondale-related photographs that had belonged to Andrew A. Collier) was donated to the Carbondale Historical Society in April 2012 by William A. Collier (Somerset, NJ) in memory of his father, Andrew A. Collier, who worked in the Coal Brook Colliery of the Hudson Coal Company in Carbondale, circa 1917-1931. Andrew A. Collier's father, Charles J. Kollier, who died in Carbondale in 1915, worked on passenger cars for the D&H in the early 1900s. The Collier family lived at 40 Forty-Second Street. William A. Collier also became a "Friend of D&H Caboose No. 35964" at the same time.

Here is a photograph of Andrew A. Collier, shown on a fishing expedition:



Andrew A. Collier

(November 14, 1899--July 11, 1968)

Here are three additional photos of Coalbrook Colliery. Our thanks to John V. Buberniak for making available these photographs for publication here.

Coalbrook Colliery:



Coalbrook Colliery



Coalbrook Colliery

Coalbrook Colliery:



Coal Brook Colliery Breaker, Carbondale, PA

Horgan Photo note:

Horgan photo #20837, 1920, p. 52:

"General View of Cooling Towers Power Plant and Breaker", Coal Brook Colliery, Carbondale, Lackawanna County." On image: "Coalbrook Coll'y, May – 1920"; another Coal Brook photo in *Horgan*, p. 68.

1832

Consolidated Breaker

Consolidated Breaker: see note under Hillside Coal and Iron Company

1833

Conyngham Colliery

This was a Delaware and Hudson colliery.

On November 26, 1886, forty-two men were burned, some in the most frightful manner, at the Conyngham Colliery in Wilkes-Barre. The unaccountable negligence and neglect of orders shown by Thomas O'Brien, who was one of the victims, caused the disaster. The details on this horrible accident are presented in the *Carbondale Leader* of November 27, 1886, as follows:

“THE MINE HORROR. / INEXCUSABLE DISREGARD OF ORDERS SAID TO BE THE CAUSE. / Twelve Men Thought to be Fatally Burned and Many Others More or Less Injured. Brave but Difficult Work of Removing the Victims. / WILKESBARRE, Pa., Nov. 26.—One of the most fatal explosions of mine gas that has occurred in the mines of the anthracite coal fields for many years took place yesterday morning at the Conyngham colliery of the Delaware and Hudson company. Forty-two men were burned, some in the most frightful manner. Twelve of these will certainly die, though the nature of their injuries makes it possible for them to linger in terrible suffering for a day or two. The explosion took place just as the men were going to work. The colliery employs about 200 men and boys, and half of these had entered the shaft. Owing to the late storms the mine had made a great deal of water, and some portions of it were not in a workable condition. The men expected to receive orders not to work, and instead of proceeding direct to their chambers about fifty or sixty waited round the foot of the shaft, anticipating the order to return home. They were standing in groups around the foot of the shaft, in the gangways and around the fire bosses' shanties, when suddenly a terrible explosion echoed through the mine, and an instant after a sea of flame burst from an old abandoned passage opening on the main gangway, not far from the foot of the shaft. / The groups of men were enveloped in a sheet of flame, the whole atmosphere was on fire, while the terrible force of the explosion picked the men up as though they were straws and swept them before it, hurling them against the sides and timbers and covering them with wreck and debris. / The explosion lasted but a second. In far less time than it takes to describe it everything was over, and in place of the groups of strong, stalwart men there was nothing but prostrate forms, blackened, scorched and charred until wholly unrecognizable. The smoke, flame and dust rushed up the shaft with the violence of a cyclone, and shot hundreds of feet in the air, a frightful token to all the country round of havoc wrought below. The signal was seen and understood by every one living within

sight. The homes of the men employed in the colliery were nearly all within half a mile of the shaft, and the terror and agony caused in the hearts of mothers, sisters and wives can find no expression in words. Everything was left behind, and, bareheaded and in many cases barefooted, women, men and children rushed across the snow covered fields and roads and swarmed around the black buildings that stood at the head of the shaft. The frantic grief of the women was heartrending to see. They wept aloud and called on the names of those dear to them, whom they feared were lost beyond recovery. / Cool and experienced men were at work rescuing the injured and dying. The inside superintendent, David McDonald, who was on the surface at the time, immediately organized a gang of rescuers, and, braving the smoke and after-damp, descended heroically into the pit of death. In ten minutes he and two of his men were brought out senseless, overcome by the after-damp, but the others were not to be deterred, McDonald himself, on recovering, again entering the mine. The ventilation was not altogether destroyed and soon the air inside became clear enough to support life. Then the men below sent up, three or four at a time, the blackened and writing forms they found so thickly strewn around the foot of the shaft. It did not take long, for they had not far to search, and within an hour and a half from the time of the explosion thirty-three helpless beings, suffering the most horrible agony, had been sent to the surface, while many others who were not so badly hurt had come up on the cage and gone home with the assistance of friends. On the surface outside Superintendent John Bowers had organized a force of helpers and took charge of the injured as they reached the surface. He established a line of guards around the shaft head, and these held back by sheer force the throng that surged around. The tears and entreaties of the women to be allowed to see and help their suffering friends were not listened to, but not infrequently some poor woman, rendered frantic by grief and suspense, would burst through the line of guards as she saw some blackened form carried from the shaft head and rush toward it, only to be driven back by stern force. / The men as fast as brought to the surface were carried to the engine house close by and laid on the floor. There a dozen men were stationed to look after them. Barrels of oil and blankets had been provided, and as the unfortunate men, groaning and shrieking in their terrible agony, were laid on the floor they were covered with oil and then wrapped in oil-soaked blankets and cotton waste. Some who were burned internally prayed for water, but this would not be given. Oil in free doses was poured down their scorched and blackened throats. The scene in the engine room was one to appall the stoutest heart. The floor was covered with the forms of men which bore little resemblance to humanity. Every face and head was scorched black and so swollen, cut, and covered with dirt, mud and blood that not a man could be recognized, and, if unable to speak, was sent unidentified to the hospital. In many cases the skin was peeling in shriveled strips from the bodies, showing the quivering flesh and bursting blood vessels. It was a horrible sight, rendered still more horrible by the heartrending groans of the suffering men. Two ambulances and a number of spring wagons were obtained, and as fast as possible the unfortunate men were lifted into them and taken to their homes or to the hospital. ” (*The Carbondale Leader*, November 27, 1886, p. 1)

“NAMES OF VICTIMS. / And How the Accident is Supposed to Have Happened. / The twelve victims whose injuries are fatal are as follows: Cornelius Boyle, miner, aged 38, married. / John Cannon, miner, 40, married. / Thomas O’Brien, miner, 30, married. / Condy Cannon,

miner, 30, married. / Richard Coulter, miner, 26, married. / Edward Kerns, laborer, 27, single. / Hugh Sweeny, laborer, 30, single. / Dennis McCole, miner, 40, single. / John Dougherty, laborer, 30, single. / Daniel Ferry, miner, 30, married. / Michael O'Brien, laborer, 33, married. / Christopher Brundage, miner, 35 single. /The following are seriously burned, and while it is hoped that they may recover, the nature of their injuries renders it possible that some nay not: / Patrick McCabe, miner; Ernest Williams, laborer; Nicholas Scoble, miner; Michael Corrigan, laborer; Alfred Annear, miner; James R. Borie, miner; Patrick Herron, laborer; Barney Sweeney, laborer; Patrick Kelley, laborer; Patrick Dougherty, miner; Michel Corcoran, laborer; Walter Neal, door boy; John T. Mack, driver; John Toole, foot tender; William Williams, fire boss; Patrick Gallagher, laborer; Frank Sweeney, laborer; Michael and Hugh Fr[?]el, door boys; John Un[?]berwunst, door boy; John Rowe, driver. / The unaccountable negligence and neglect of orders shown by Thomas O'Brien, who will pay for his rash act with his life, caused the disaster [emphasis added]. The old passage where the explosion occurred was known to be dangerous, and though occasionally used for ventilation purposes, was known to be full of gas whenever the mine made much water. Monday last it was found to be filling with gas. The door at its mouth was shut and a board placed across with the word 'Gas' printed on it and two big crosses, which would show to any who could not read that danger existed. Yet, despite these signals, Thomas O'Brien, which his naked light upon his head, entered the passage and had hardly passed the door when the gas caught from his lamp and the explosion followed. The colliery was regarded as a safe one and generally free from gas and naked lights were always used except in places where the fire bosses detected gas." (*Carbondale Leader*, November 27, 1886, p. 1)

The extraordinarily important role played by the fire boss in mine safety is underlined by the tragedy reported above at the Conyngham Colliery. The fire boss is the person employed at a mine or state certified official, responsible for examining a mine for dangers, particularly explosive, poisonous or suffocating gases. Usually the fire boss is the first person to enter a mine, to verify its safety, before a shift crew enters.

Shown below is a post card view of the "Office of Fire Boss in Anthracite Coal Mine." This post card is in the collection of the Carbondale Historical Society.



Office of Fire Boss in Anthracite Coal Mine

Here are the accidents at the Conyngham Colliery that are reported in the 1887 *Report of Inspectors of Mines*

p. 65: February 17, James O. Boyle, a miner, age 40, was in a non-fatal accident (severely cut on head by a fall of coal) at the Conyngham Colliery.

p. 65: March 16, Stephen Snyder (miner, age 55, married, with six children), William Blume (laborer, age 22, not married), William Theim (laborer, age 24, no married), and Jacob Schneider (miner, age 53, married with four children) were all in a non-fatal accident at the Conyngham Colliery: cause of accident: By using naked lights where prohibited, a quantity of gas, which accumulated through negligence to close a door, ignited and exploded, burning them slightly-- Snyder on his hands, Blume on back and arms, Theiman on face, hands and back, and Schneider on hands.

p. 68: July 25, John McDonald, a carpenter, age 27, married with one child, was in a non-fatal accident (cut his foot severely with an axe) at the Conyngham Colliery.

p. 70: November 7, Hugh O'Donnell, age 26, a miner with two children, was in a non-fatal accident (cut and bruised on head and shoulder by coal falling from side of pillar) at the Conyngham Colliery.

p. 71: December 21, Owen Cronan, a laborer, age 24, not married, was in a non-fatal accident (severely cut on shoulder by a piece of coal falling from rib) at the Conyngham Colliery.

1834

DeAngelis Coal Company Breaker

Located on South Park Street, Carbondale

The DeAngelis Coal Company was an independent producer. It was announced in the July 16, 1954 issue of the *Carbondale News* that the DeAngelis Coal Co. (Joseph T. DeAngelis, an official at the firm) was halting operations in Carbondale, Archbald, and Dickson City. Here is that announcement:

“DeAngelis Idles 130 Area Miners / Further curtailment of hard coal operations in the region was announced today. / The DeAngelis Coal Co. an independent producer, announced that it was halting operations in this city [Carbondale], Archbald and Dickson City. / Joseph T. DeAngelis, official of the firm, said the order would affect some 130 men. Five have been idled in Carbondale, 90 in Archbald, and 35 in Dickson City. / The company said its breaker, located on South Park St., will continue operations, processing run-of-the-mine coal brought in from outside operations.” (*Carbondale News*, Friday, July 16, 1954)

Here is a wonderful photograph, by Bill Nally, of the *DeAngelis Coal Company First Aid Team*, September 6, 1947. A framed copy of the original photo and a copy of a newspaper clipping about the photo were donated to the Carbondale Historical Society, via Jerry Gravine and Ron Konosky, on March 21, 2011.

This First Aid meet took place at Russell Park, Carbondale. This photo was published in the *Scranton Tribune*, where the caption on the photo reads as follows:

“ACHIEVE PERFECT RECORD—This first aid team, comprising workers from DeAngelis Coal Co., Carbondale, drew the commendation of Richard Maize, State Mine Secretary, when it scored 100 percent in the annual first aid meet of area coal companies held in Carbondale’s Russell Park, Sept. 6. This was the first time in 29 years that a perfect score [portion of clipping missing]. Seated, left to right, Bernard Heenan, captain; George H. Lewis, safety engineer [portion of clipping missing] lis; James Lovito and Paul Brady; standing, left to right: Frank DeAngelis, James [portion of clipping missing], Thomas O’Connor, Joseph Mikulak, Carmine Chellino and Samuel J. Falbo.”

DeAngelis Coal Company First Aid Team, September 6, 1947. Photo by Bill Nally. Identification of persons shown given on preceding page:



DeAngelis Coal Company First Aid Team, September 6, 1947.

Here is a hand-tinted mounted studio photograph of De Angelis Coal Co., Inc. in the collection of the Carbondale D&H Transportation Museum.



De Angelis Coal Company Breaker

Shown below is a receipt for nut and pea coal sold by DeAngelis Supreme Anthracite, Inc., Carbondale, PA to City of Scranton, Dept. of Supplies, Scranton, Penna. This receipt was donated to the Carbondale Historical Society on August 13, 1966 by the Lackawanna Historical Society.

ONE LEANED COAL

DeAngelis Supreme Anthracite, Inc.
ANTHRACITE MINERS AND SHIPPERS

SOLD TO: City of Scranton
 Dept. of Supplies
 Scranton, Penna.

PS 662

CARBONDALE, PA.

QUOTATIONS NOT BINDING UNTIL ACCEPTED BY US. ALL SALES SUBJECT TO TRANSPORTATION FACILITIES, STRIKES, EMBARGOS, OR OTHER CAUSES BEYOND OUR CONTROL. RAILROAD WEIGHTS GOVERN ALL SALES.

ORDER NO.	SHIPPED	CONSIGNEE TO	INITIAL & CAR NO.	SIZE	WEIGHT	PRICE	AMOUNT
	8-13-66	Engine # 5	142126	Nut	4.00	13.95	\$55.80 ✓
	8-13-66	Engine # 1	142127	Pea	1.00	11.50	11.50 ✓
							\$67.30 ✓

APPROVED FOR \$ 67.30
Frank C. Long
 DIRECTOR PUBLIC SAFETY

APPROVED FOR \$ 67.30
John R. Lawless
 CHIEF, BUREAU OF FIRES

ATTESTED
 STANDARD ANTHRACITE
 DEANGELIS SUPREME ANTHRACITE, INC.

APPROVED FOR \$ 67.30
Chester Walshe
 DIRECTOR OF SUPPLIES

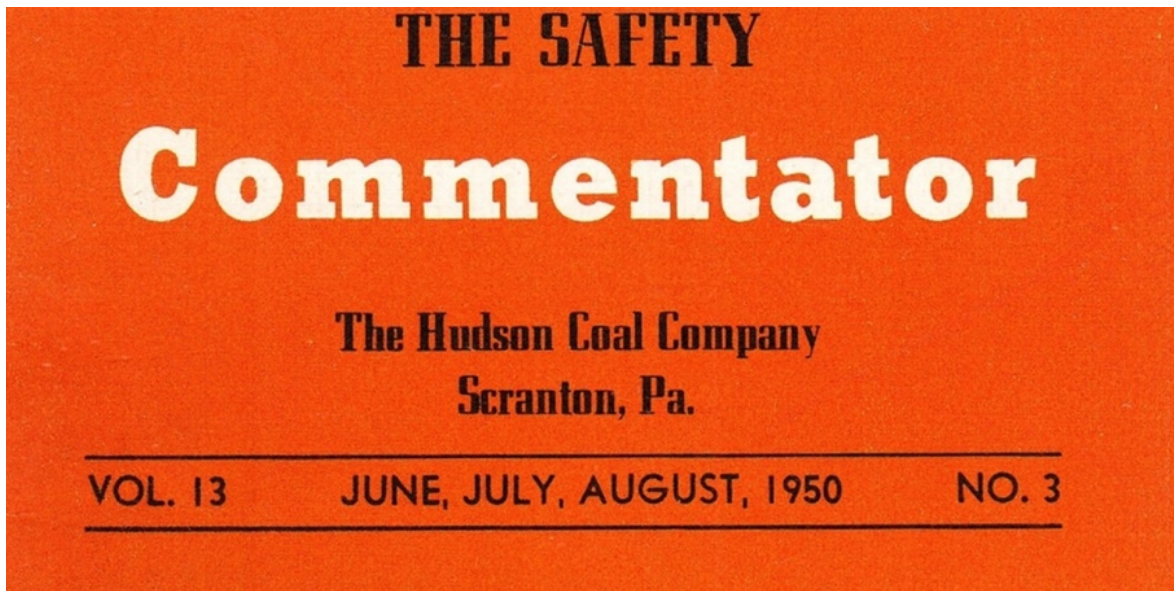
First Aid and the D&H and Mules:

As we stated in Volume VII (pp. 117-118) in this series, mules were an integral part of the mine rescue process that led to the formation of the First Aid movement in America, in Jermyn, PA. That we from the article titled "Before the Doctor Comes" that was published on pp. 103-105, 110 of the April 1, 1929 issue of *The Delaware and Hudson Company Bulletin*, in which there is a very nice account of the founding of the First Aid movement in America by Dr. M. J. Shields, Jermyn, PA.

Reprinted in that article is an account that was originally published in *Railway Life* about Dr. Shields and the story of his work that was published at the time of his retirement. Here is a portion of the account of Dr. Shields' pioneering work that was originally published in *Railway Life*:

"On a peaceful summer morning in 1899 the quiet of the little mining village of Jermyn, Pa., was suddenly disturbed by three long blasts of the siren at the coal breaker. This was the prearranged signal for calling the mine ambulance—the signal that some unfortunate miner was hurt; also a signal to the mule barn a half mile away from the mine shaft for the 'barn boss' to hitch two crippled mules to the old-fashioned, high-wheeled mine ambulance, and drive to the mine as quickly as possible. Miners' wives could be seen rushing from the doorways of cottages into the streets, anxiously asking each other who was hurt. This cruel custom of the three long whistles of the siren as a signal that a miner was injured had obtained for years. Every one in the village knew and dreaded it. This signal was sounded no matter whether it was a broken arm or a broken back. It caused agonized suspense to every miner's wife. 'Was it my man? How bad is he hurt? Is he killed?' were questions sometimes unanswered for an hour or two. The terrifying suspense sometimes resulted seriously. Nervous women were thrown into convulsions, and the whole village upset and in a tense state of anxiety. / It was just such instances as this, and because comparatively slight injuries were made serious, and serious injuries made fatal by lack of proper first aid, or through ignorance the injured man received the wrong first aid, that Dr. M. J. Shields, a general practitioner and rather a newcomer in the village resolved, if possible, to remedy the unfortunate conditions. He succeeded in stopping the siren signal for the ambulance by having a telephone installed in the mule barn. / Knowing that he had among his clientele some 'Cousin Jack' English miners from Cornwall who had received some training in first aid from the St. John's Ambulance Association, Dr. Shields succeeded in getting about twenty-five men together and organized, in December, 1899, a first aid association. These men themselves contributed to the work and with the aid of several benevolent societies raised sufficient funds to send to London to purchase first aid books. So during the winter of 1900, Dr. Shields gave a course of lectures and demonstrations on how to handle accidents 'before the doctor comes.' Subsequently funds were raised by volunteer subscription to purchase first aid supplies, and first aid boxes were placed in each of the five 'headings' in the mine. In this manner was the first aid movement started in the United States. . . In 1905, Dr. Shields succeeded in influencing Capt. W. A. May, the general manager of the Pennsylvania Coal Company, to organize first aid and make it a part of the operative plan in the concern's mines. . . The humane movement extended to the whole anthracite coal region and monthly first aid meetings in charge of a physician were adopted by all the larger companies. / Realizing that something further should be done to stimulate and keep up interest, Dr. Shields conceived the idea of first aid contests, patterned after the St. John's Ambulance Association 'competitions' in Great Britain. In October, 1906, there was held in the armory at Scranton the initial first aid contest in the United States. From this beginning first aid contests have spread so they are held, not only by the mining companies, but nearly every industry, notably by the Associated Bell Telephone Companies and the railroads."

First Aid and the Hudson Coal Company: See “The Safety Commentator,” 1950, below:



In 1950, the Hudson Coal Company was well represented at the 38th National Safety Congress and Exposition that was held October 16-20 at the Stevens Hotel in Chicago. That we know from the report on the 38th National Safety Congress that was included on page 2 of Volume 13, No. 3 (June, July, August, 1950) of *The Safety Commentator* (which was published by The Hudson Coal Company). Here is page 2 of that report:

THE SAFETY COMMENTATOR

Published by The Hudson Coal Company, Scranton 1, Pa.

Henry H. Null, III, Editor
Arthur R. Soffley, Associate Editor
Mrs. Dorothy Hahn, Editor Woman's Page
Joseph Koslowski, Photography



Furnished to all employees on request at no cost to them. THE COMMENTATOR exists primarily to promote safety and furnish safety education, and secondly, to foster honest and friendly relations between Management and employee. News or communications may be sent to THE COMMENTATOR, c/o The Hudson Coal Company, Scranton 1, Pa., or may be given directly to your colliery correspondent.

EDITORIAL

O.K. to Hoard—Coal

There has been a lot of indignation directed against those who have been sweeping the grocery shelves of soap, sugar and other items expected to be scarce in the event of another world war. This indignation is rightful indignation because it causes rising prices and could result in rationing with its attendant nuisance. Only by rationing can scarce goods be fairly divided.

The practice referred to is called hoarding. It is unpopular because of its basic selfishness; but all hoarding is not necessarily selfish. There is a time when hoarding is actually a patriotic duty. We refer to the hoarding of anthracite which according to the Anthracite Institute Bulletin "will not deteriorate. . . will not ignite by spontaneous combustion. . . is readily and cheaply stored."

Since only a limited amount can be stored at the mines or by coal dealers, it is prudent and patriotic for the consumers to fill their bins with coal now when the supply is plentiful. There may be a shortage of gas and fuel oil as there was in World War II and it will be easier for the coal dealers to service those who substitute anthracite for other fuels when not called on to furnish coal to regular users who had an opportunity of filling their bins when coal was plentiful.

38TH NATIONAL SAFETY CONGRESS

The Hudson Coal Company was well represented at the 38th National Safety Congress and Exposition held this year, October 16 to 20, at the Stevens Hotel in Chicago.

The Hudson Coal Company party was in charge of Mr. J. M. Reid, General Manager, and consisted of the following: Edison Thomas, Colliery Superintendent, Marvine Colliery; Thomas Griffiths, Sectional Foreman, Marvine Colliery; Joseph Nixon, Mine Foreman, Eddy Creek (Birdseye) Colliery; Anthony Walsh, Sectional Foreman, Pine Ridge Colliery. These mine officials were awarded this trip on the basis of their good safety record for the year ending August 31, 1950. Karl T. Miller, Safety Engineer; William B. Roth, Ventilation Inspector; and Arthur Soffley, all of the Safety Department, also were in the party.

THERE IS ROOM FOR IMPROVEMENT

By Karl T. Miller, Safety Engineer

"Let's take a look at the records" and compare the January 1950 to July, inclusive, period with the first seven months of 1949.

These are the total accidents, fatal, serious, and minor, for the various classifications:

	Increase during 1950
Roof falls	10 percent
Transportation	8 "
Handling Supplies & Material	4 "
Tools and Machinery	35 "
Explosives	34 "
Electricity	59 "
Slipped and fell	12 "
Miscellaneous	5 "
Total — all classes	13 "

During the 1950 period there was a ten percent increase in working time over 1949 but on only four classifications did this offset the increase in accidents.

I don't think there was any change in the tools, machinery, explosives or electricity so the change must be in the manner in which we are using them.

If we are to show an improvement during the remainder of the year, we must realize that all work can be dangerous and result in accidents if the proper precautions are not taken.

CARELESSNESS

"I am more powerful than the combined armies of the world.

"I have destroyed more men than all the wars of the nations.

"I am more deadly than bullets, and I have wrecked more homes than the mightiest of guns.

"I steal in the United States alone over five hundred million dollars each year.

"I spare no one, and I find my victims among the rich and the poor alike, the young and the old, the strong and the weak, widows and orphans know me.

"I loom up to such proportions that I cast my shadow over every field of labor, from the turning of every grindstone to the moving of every railroad train.

"I massacre thousands upon thousands of wage earners in a year.

"I lurk in unseen places, and do most of my work silently. You are warned against me, but you heed not.

"I am relentless.

"I am everywhere — in the home, on the streets, in the factory, at railroad crossings, and on the sea.

—Anonymous

IT REALLY HAPPENED

A worker in Oklahoma got his unprotected foot crushed by a crate containing 1,900 pairs of safety shoes.

—Safetygram—

38th
National
Safety
Congress

Here is a very detailed—and interesting—summary statement on injuries and time lost at the Hudson Coal Company collieries for the period April-May-June 1950. This summary statement was published on page 3 of the June-July-August 1950 issue (Volume 13, No. 3) of *The Hudson Coal Company's The Safety Commentator*:

HOW DO WE STAND?									
Colliery & Supervisor		Apr.-May-June, 1950		Total Lost	Colliery & Supervisor		Apr.-May-June, 1950		Total Lost
	Eye Injuries	Lost Time Injuries	†	Time Injuries Year to Date		Eye Injuries	Lost Time Injuries	†	Time Injuries Year to Date
Total for Company	61	190	110	322	Gravity Slope Colliery:				
Coal Brook Colliery:					*Thos. Davies	M.F.	1	1	5
Park, Dougherty	M.F.	3	6	2	*Hugh Ruddy	S.F.	0	0	0
Paul V. Moohy	S.T.	3	4	1	Robt. Patterson	"	1	1	0
*Wm. Stratford	"	0	0	0	Outside	"	0	1	0
Eugene Slick	"	0	1	0	Total Colliery		1	2	1
Preston Lambert	"	0	0	0	Marvine Colliery:				6
Outside	"	0	2	1	Warren Shirey	M.F.	0	9	4
Total Colliery	3	8	3	18	John Masterson	S.F.	0	1	0
Olyphant Colliery:					William Jones	"	0	0	0
*William Muncie	M.F.	2	14	9	George Jackson	"	0	4	2
Thomas King	S.F.	0	1	1	J. Walter Martin	"	0	1	1
*James McAndrews	"	1	1	0	Daniel Muncie	"	0	3	1
George Calvert	"	0	4	3	*John Davison	M.F.	0	4	2
*Andrew Hare	"	1	3	2	*Thomas Griffiths	S.F.	0	0	0
*Peter Mackrell	"	0	1	0	*Joseph Legenza	"	0	2	0
Sergio Menichetti	"	0	1	1	*Stephen Hockaday	"	0	1	1
Harry Lewis	"	0	0	0	Emerson Richards	"	0	1	1
*Geo. Robinson	"	0	3	2	Outside	"	0	2	1
*William Morgans	"	0	0	0	Total Colliery		0	15	7
*Edward Owens	M.F.	4	9	6	21	Delaware Colliery:			
Thomas Rogers	S.F.	0	0	0	Harry Reese	M.F.	2	6	3
John Rucat	"	1	2	1	*Robert Holmes	S.F.	0	0	0
James Nixon	"	1	0	0	Edward Muncie	"	0	1	0
John Hodgson	"	0	0	0	*Richard Bowen	"	1	1	0
George Evans	"	0	1	1	*Wm. Tregaskis	"	0	0	0
*John Fitzgerald	"	1	2	0	John Ketchel	"	0	1	1
*James Callaghan	"	1	1	0	J. Wisloski	"	0	0	0
David Roe	"	0	2	2	James Beyer	"	0	3	2
*Frank Loftus	"	0	1	1	Outside	"	0	1	1
Outside	"	2	4	1	Total Colliery		2	7	4
Total Colliery	8	28	16	53	Baltimore Colliery:				16
Eddy Creek Colliery:					*Ernest Telford	M.F.	3	6	3
*E. B. Charlton	M.F.	9	20	12	Richard Jones	S.F.	1	0	0
*Wm. Williams	S.F.	1	3	2	*Francis Hunt	"	2	3	2
*Andrew Schultz	"	2	0	0	Michael Morgan	"	0	3	1
*Jackson McKinley	"	1	2	1	*Joseph Dixon	"	0	1	0
Thos. Davis	"	0	2	1	*Robert Pattison	M.F.	0	7	6
Clyde Watkins	"	1	0	0	Lawrence Kotar	S.F.	0	2	1
Robert Neesham	"	2	7	3	Earl Rutherford	"	0	1	1
John F. Walsh	"	0	2	1	Aloysius Toolan	"	0	4	4
Darius Thomas	"	2	2	2	Outside	"	0	1	0
Thos. Wilson	"	0	2	2	Total Colliery		3	14	9
Jas. G. Muncie	M.F.	10	16	10	20	Loree Colliery:			
*George Parry	S.F.	0	5	5	Guy E. Conner	M.F.	3	25	19
Hobbsby Davies	"	1	2	1	James Elvidge	S.F.	0	1	1
*Ernest Browning	"	0	0	0	*Donald Laity	"	0	3	2
Felix Marchines	"	1	4	3	Joseph Servitsky	"	1	2	2
Howard Parry	"	2	1	1	David Martin	"	1	5	4
Wm. Richards	"	4	3	0	*Harold Young	"	0	2	1
Russell Owens	"	1	1	0	Fred Tischler	"	0	2	1
*Jos. Nixon	M.F.	0	3	0	Thomas Stires	"	0	3	3
Wm. Simpson	S.F.	0	2	0	James Deeble	"	0	2	1
Outside	"	0	0	0	Wm. Jenkins	"	1	1	1
Total Colliery	19	39	22	58	Fred Rorick	"	0	4	3
Pine Ridge Colliery:					*John Richardson	M.F.	3	14	4
*Ralph Smith	M.F.	2	7	5	Edward Struck	S.F.	0	2	1
J. B. Nichols	S.F.	0	1	1	William Bowen	"	2	4	1
James McGrew	"	1	3	2	John Healey	"	0	1	1
Ray Burian	"	0	1	1	Adam Ryscavage	"	1	3	1
James Gallagher	"	1	2	1	*Richard Davies	"	0	2	0
Anthony Walsh	"	0	0	0	*Benjamin Samuel	"	0	2	0
Thos. Yearsley	"	0	0	0	Ervin Conner	M.F.	1	19	12
Outside	"	2	3	1	*James Wilce	S.F.	0	1	0
Total Colliery	4	10	6	18	Frank Malloy	"	0	0	0
					*Michael Mczelack	"	0	3	2
					Robert Fowler	"	0	0	0
					Joseph Tuholski	"	0	8	5
					Clement Maher	"	1	4	3
					*Donald Laity	"	0	3	2
					Outside	"	5	6	4
					Total Colliery		12	64	39

(*) Safety Key Man — (M.F.) Mine Foreman — (S.F.) Sect. Foreman. (†) Serious injuries (8 days or more) included in lost-time injuries. ** - 1 Fatal. *** - 2 Fatais.

Also published in that same issue (June-July-August 1950) of *The Safety Commentator* is a complete report on the Tenth Annual First Aid Contest that was held at the Watres Armory, Scranton, Pa., August 18, 1950. Here is that report:

**THE HUDSON COAL COMPANY
TENTH ANNUAL FIRST AID CONTEST
Watres Armory, Scranton, Pa., August 18, 1950**

Baltimore Colliery ran off with the honors at what was probably the hottest first aid meet held so far. In spite of perspiration-drenched clothing, the first-aiders worked at top speed and convinced the equally-perspiring judges and spectators that they knew the value of speed in bandaging and hospitalizing the injured. Second honors went to Pine Ridge, third to Loree No. 5, and fourth to Coal Brook, the only up-valley team to place. Teams, their percentage and positions were:

Baltimore, 99.63%, 1st; Pine Ridge, 99.48%, 2nd; Loree No. 5, 99.03%, 3rd; Coal Brook, 98.78%, 4th; Gravity Slope, 98.57%, 5th; Delaware, 98.38%, 6th; Loree No. 3, 98.33%, 7th; Eddy Creek, 98.15%, 8th; Marvine, 98.08%, Olyphant 97.97%, 10th; and Powderly, 97.95%, 11th.

Attendance at the meet was the best on record. Interest in first aid, far from declining, seems to mount from year to year. Richard Maize, Secretary of Mines for the Commonwealth of Pennsylvania, found time from his duties to attend the meet and serve as an honorary judge, as did E. H. McCreary, from the U. S. Bureau of Mines. Andrew Wilson, State Mine Inspector, an outstanding apostle of first aid, served as Chief Judge and handled the announcements in a capable manner.

Supervisory Judges were: Joseph Burns, Pennsylvania Coal Co.; A. S. Glance, Coal Operators Casualty Co.; Osborne Morgan, Lehigh Valley Coal Co.; Drs. Charles F. Netzel; C. L. Ashley; J. Carpenter McNelis; W. P. Knight; Alexander Shellman, and R. J. Touch.

Distribution of the problems was made by State Mine Inspector Theodore Wackley.

Lay Judges were: D. D. Domenburg, W. T. Dorrance, H. F. Wilson, Harvey Landis, Robert C. Todd, J. R. Glennon, all Federal Coal Mine Inspectors, U. S. Bureau of Mines; P. A. Loughney, Safety Director, Locust Coal Co.; M. L. Ingraham, Safety Instructor, U. S. Bureau of Mines; Earl B. Litvin, Pennsylvania Coal Co.; S. J. Nemshick, Pagnotti Coal Interests; William Pierce, Lehigh Valley Coal Co.; Carl H. Riehl, Lehigh Valley Coal Co.; Herman Davis, Pennsylvania Coal Co.

Examining Judges were: Charles Jones, Joseph Ward, Clyde C. Brehm, David Richards, M. W. Price and Harry A. Leidich; Recorders were: Arthur R. Softley, B. T. Jones, Charles E. Morris and William B. Roth; Registrars were: William W. Martin and Robert von Storch; Timekeepers were: David W. Cosslett, Joseph C. Hines, Kenneth C. Lee, Theodore Rees and Willard G. Ward, all State Mine Inspectors.

The affair was arranged by the following committee: J. M. Reid, General Manager; W. B. Petzold, Mining Engineer; Karl T. Miller, Safety Engineer; Robert Anderson, Electrical Maintenance Foreman, Olyphant, and H. H. Null, Asst. Colliery Supt., Eddy Creek.



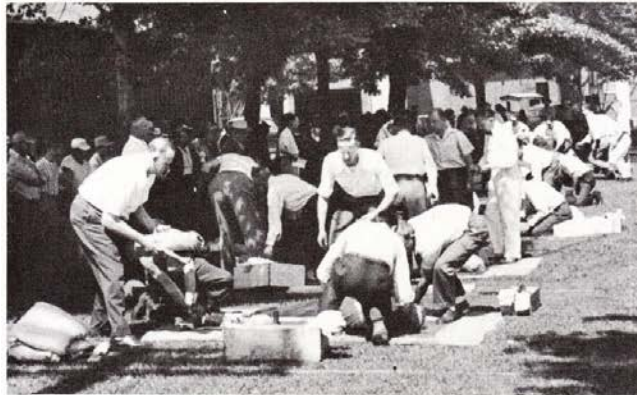
Above: It was a warm night at the Armory. General Manager John M. Reid, left, and Pennsylvania's Secretary of Mines, right, have shed their coats but Chief Judge Andrew Wilson, is taking the heat fully appared.

JUNE, JULY, AUGUST, 1950

THE SAFETY COMMENTATOR



Lay Judge R. C. Todd, Federal Mine Inspector, keeps a sharp eye on one of the competing teams, while to his right, Supervisory Judge Osborne Morgan, Safety Engineer, Lehigh Valley Coal Co., surveys the whole field.



A fine summer's day greeted Olyphant-Eddy Creek's preliminary Meet. Eddy Creek Shaft team works in the foreground.

Below: General Manager John M. Reid presents veteran mine foreman E. B. Charlton with the Bureau of Mines Certificate of Achievement, National "Sentinels of Safety" Competition. Olyphant Shaft, under Mr. Charlton's piloting, placed fifth in the National contest. On the right of the picture, Superintendent W. I. Stonebraker glows with pride.



WORKER STIMULANTS — RUSSIAN STYLE

"The grass always look greener on the other side of the fence." The grass on the American worker's side of the fence would certainly look its greenest to the Russian worker if the Russian worker knew the difference between his working conditions and those over here.

When reading an article called "Penalties and Rewards in Soviet Law" in the May, 1950 issue of the Washington Law Review, some interesting facts about the Russian worker's lot caught our eye. We pass them on to you.

Russian production workers have these stimuli to spur them on: If they violate the rules without good reason, such as absence from work, lateness, jumping the gun on leaving work at the end of the day, taking an extended lunch period or loitering on the job, they are subject to criminal punishment or to six months' "correctional labor at their regular place of employment" with 25% pay reduction. For example, lateness of more than twenty minutes on any day without a good reason means a fine of 25% of a half-year's pay. Repeated lateness brings on a year's prison sentence. Absence from work without good cause means a prison sentence of one to two years. And, arbitrarily quitting a job is punishable by three-year penalties.

"Correctional labor at their regular place of employment" amounts to this: While a worker is serving a sentence at corrective labor, he gets no pay raise, vacation or any other privileges. Time spent at this work does not count for social security benefits nor for seniority rights in his occupational classification. In addition, he can be demoted to an inferior job.

The Russian authorities do not consider any of the following to be good cause for lateness or absence: Illness of the worker's wife or children, failure to get on a street car or train because it was overcrowded, or the necessity of standing in line for articles of primary necessity.

Production workers aren't the only ones who work under the constant threat of prosecution: Anyone in an enterprise, such as managers, supervisors and assistants, can be indicted for any breach of labor discipline. The excusing by management of any violation is absolutely prohibited. It is management's duty to prosecute violators immediately and without fail. Otherwise management itself is subject to trial not only for neglect but also for concealing crime, and is punishable as an accomplice. For example, a supervisor in a factory was sentenced to a two-year term because several times he sent home an intoxicated worker instead of prosecuting him.

—Prentice Hall

THE HUDSON COAL COMPANY MINE RESCUE TEAMS COMPLETE THEIR SEASON'S TRAINING



Olyphant team: Left to right, William Roth, Instructor of all teams, Stanley Rook, Alex Vadella, John Smoley, Phillip Bartkowski. Below: Pine Ridge: Francis Korncavage, Allison Herron, Frank Trinisewski, Wright Moseman, George Thompson.



Delaware: Left to right, Stephen Giza, Anso Dominick, Orlando Fabbrini, Francis Stucker. Below: Loree: Joseph Tuholski, Joseph Kennedy, John Toporcer, James Scott, Frank Yamrus.





The winning team, Baltimore (in dark shirts): Seated, left to right, Levi Welch, Francis Wargo, Moses Luton, Marino Bordick. Standing, Chester Shuleski, John Lavix, Instructor, Mathew Elliott, Malcolm Pattison.



Pine Ridge, 2nd place. Standing, Joseph Beneski, William Beneski, Ralph Smith, Mine Foreman, Elmer R. Williams, Supt., Anthony Rogish, Francis Korncavage, Edward Lelashus, Instructor. Kneeling, Joseph Mrose, Frank Trinisewski, James Millham.

Below: Loree No. 5, 3rd place. Standing, George Kristofek, Thomas Jones, Robert von Storch, Asst. Supt., Fred L. Zollinger, Supt., Albert Wychulis, Richard Wright. Kneeling, Frank Czarnick, John Wanyo, Theodore Ellsworth.



Other Hudson Coal Company news that was also published in the same issue of *The Safety Commentator*:



Above: Over-all view of mechanical timber hoist. Truck on left is for timber and carries metal tool boxes for track and timbering tools (shown with lids open).



Above: Shown beside timber hoist are the workmen of Olyphant shop who helped build it. Inventor, August Ollendike, is on left of picture. Below: Closeup of hoist.



Mechanical Aid to Timbermen in Service at Olyphant

August Ollendike, Machinist Maintenance Foreman at Olyphant-Eddy Creek is the father of the machine pictured on this page, a machine which greatly lightens the work of men engaged in mine timbering by lifting timber to the desired height and holding it in place until secured. Some machines have been on the market in recent years but are extremely expensive and not specially adapted to our anthracite mines so the timber hoist of Mr. Ollendike was designed to meet these needs.

The contraption is primarily a small electric hoist, based on a swivelling plate carried by a mine truck and is mobile when pushed or drawn by an electric locomotive. It may be used to drag timbers by lowering the boom on to the truck and immobilizing it there, and in its hoisting function can raise timber collars and legs to the extreme height necessary in timbering.

Accompanying the hoist on another mine truck is a sort of tender wherein timber may be placed for sawing and which contains two metal chests for necessary tools. Included in this category are bars, timbering tools, nails, track spikes, track-laying tools and a portable electric power saw which does the necessary cutting to make proper fitting of the timber possible.

A novel feature of the hoist is the front end jacks which prevent it from tipping forward when a load is put on the boom. These jacks, which may be seen on the front of the truck in the picture opposite, bottom of page, are adjustable and permit jacking against the mine track.

When completed, the hoist was put in service in the No. 2 Bed at Olyphant Shaft where it had a thorough testing. It was found satisfactory but several improvements were suggested so the machine was taken back to the shop to allow them to be incorporated into the machine. It will soon be in service again.



Machine with timber raised to maximum height.

Below:

Recent Boy Scout Jamboree at Valley Forge, Pa., featured an archway made of anthracite. It was erected by Hudson Coal Co. employees on their own time.



VALUE OF FIRST AID RECOGNIZED

On Monday, September 11, a very unfortunate accident happened on the Pennsylvania railroad at Conshohocton, Ohio, when a fast streamliner, running late, ran into the rear end of a troop train carrying soldiers from the Lackawanna and Wyoming Valleys to Camp Atterbury, Indiana.

Among the 33 soldiers killed in this wreck 4 were the sons of the following employees at our Pine Ridge Colliery and Delaware Colliery:

Joseph — the son of Emerson Fletcher, a lampman at Pine Ridge Colliery.

Bernard — the son of Stanley Okrisinski, a miner at Pine Ridge Colliery.

Thomas — the son of Victor Ostrascwski, a locomotive brakeman at Pine Ridge Colliery.

John — the son of Paul Barna, a miner at Delaware Colliery.

On Thursday, September 14, the bodies were brought to the Armory at Kingston, Pa., and were later taken to their respective family homes, funeral homes, etc. On hand in the Armory were the families, relatives, etc. of the deceased soldiers. Anticipating that there might be some sudden sickness from shock and sorrow amongst those present, the Mayor of Wilkes-Barre, Luther Kniffen, requested and received, assistance from our first aid teams from Pine Ridge Colliery and Delaware Colliery. In addition to various first aid services rendered by these first aid men they personally handled five cases that necessitated the removal of the stricken person by stretcher to a room on the second floor of the armory that was set aside for the use of doctors to handle extreme cases. These first aid men who served under the supervision of their instructor, Edward Lelashus, a clerk at Pine Ridge Colliery, were:

Pine Ridge team:
Joseph Beneski, Captain
William Beneski
Joseph Mrose
Francis Korncavage
Anthony Rogish
Frank Trinisewski
James Millham

Delaware team:
Walter Walko, Captain
Andrew Shaw
Michael Walko
Michael Wisloski
Frank Gruver
Joseph Pokrifka
Joseph McDermott

This is an outstanding example of the value of first aid and is a compliment to these men to have their ability recognized and their assistance requested by the Mayor of Wilkes-Barre to serve in this hour of need.

Two former employees, Edward S. Leo, miner at Pine Ridge, and Andrew Wanat, miner's laborer at Pine Ridge, were also soldiers on this wrecked train but unfortunately escaped injury. When they later arrived at Camp Atterbury they sent the following post card to their buddies at the colliery:

THE SAFETY COMMENTATOR

1835

Diamond Breaker

The Diamond Breaker was located on the Providence flats. This was the first breaker in the Northern Coal Field. It was built in 1852/1853 at the DL&W's Diamond Mine in Scranton. See p. 18, above.

On May 23, 1876, at the Diamond Breaker in Scranton, Michael Clark, aged seventy years, was smothered to death when the culm chute at the breaker gave way and let an immense quantity of refuse down upon him, covering him completely and smothering him to death. Here is the report on the accident that was published in the *Carbondale Leader* of May 27, 1876:

“On Tuesday a fatal accident occurred at the Diamond breaker in Scranton. Michael Clark, aged seventy years, was loading cars when the culm chute gave way and let an immense quantity of refuse down upon him, covering him completely and smothering him to death. Mr. Clark had worked in the breaker twenty-three years, and was the oldest employee.” (*Carbondale Leader*, May 27, 1876, p. 3)

1836

Dickson Breaker

The Dickson Breaker was located in Scranton.

At the time of the flood of the Lackawanna River in December 1907, six hundred men and boys worked in the breaker.

1837

East Side Breaker

The East Side Breaker was located in Carbondale.

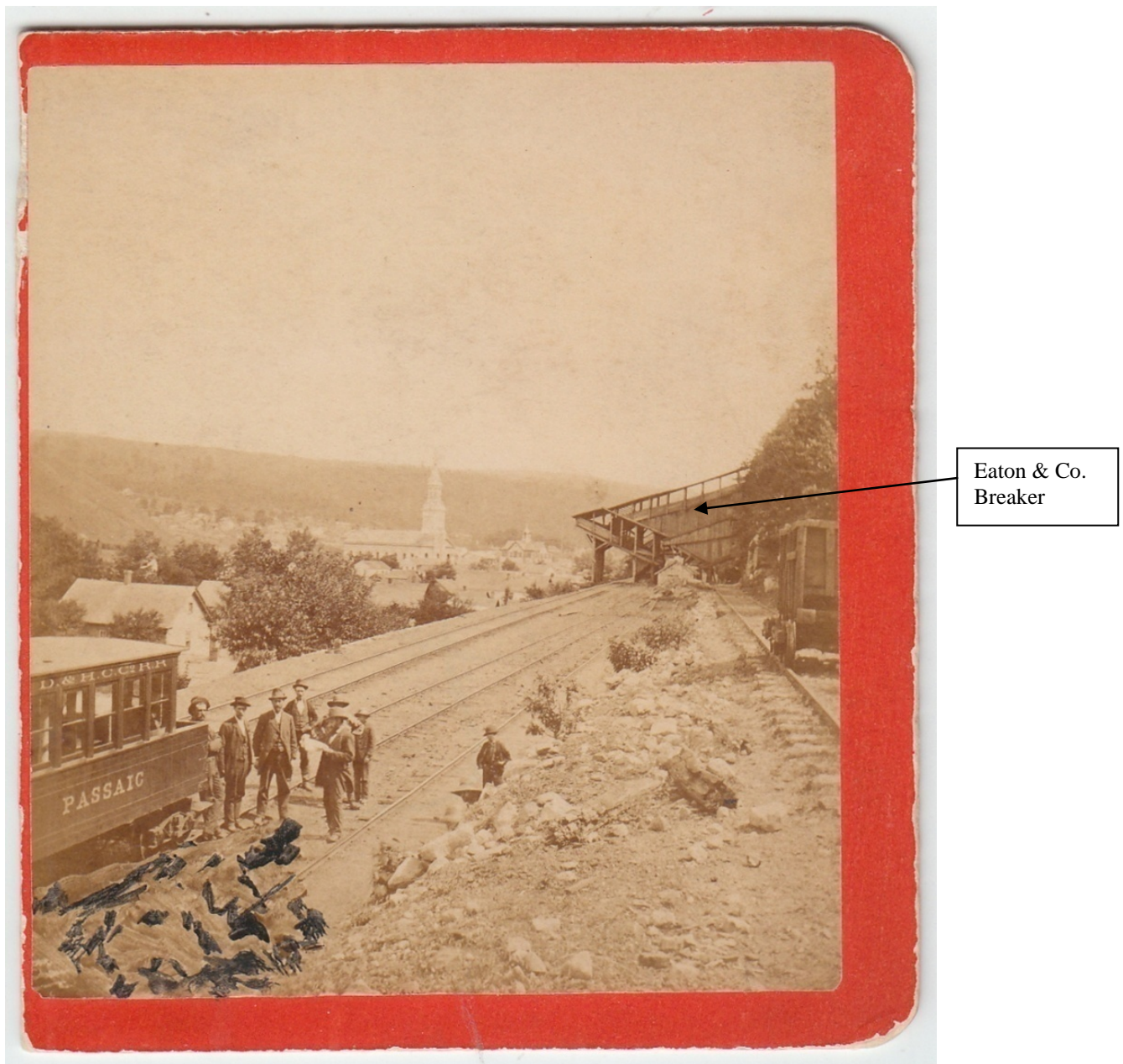
“The breaker was at Peach Hill on Wayne Street. They stopped working there in the 1950s.” (Skip Race, March 28, 2017)

1838

Eaton & Co. Breaker, Archbald

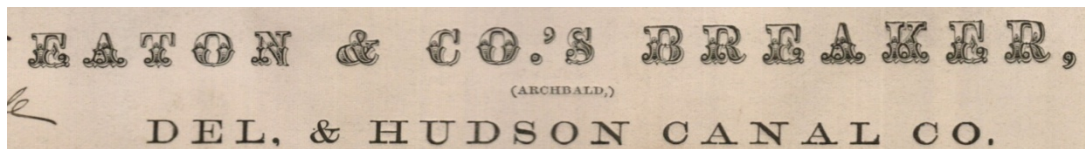
On Level 25, not far from the foot of No. 26 plane, Hensel took View #1137: *View of Archibald and Coal Beaker, seen from Railroad*. In this view, in the left foreground, we see the D&H pay

car, the *Passaic*, and a group of men standing by the tracks. In the middle ground, on the right, we see the Eaton & Co. breaker. In the distance, center, we see a Saint Thomas Aquinas Catholic Church. Here, then, is that view:



L. Hensel, View #1137: *View of Archibald and Coal Beaker, seen from Railroad.*

Here is the photograph by Johnson (Scranton, PA, 1860) of the Eaton & Co. breaker in Archbald on Level 25 (which descends to the right in this Johnson view, toward the foot of Plane 26). This original Johnson photograph is in the archives of the Wayne County Historical Society:



The obituary of George Simpson that was published in the *Carbondale Advance*, August 16, 1884, p. 3) contains interesting information about the Eaton & Co. breaker and its various owners, in this instance, George Simpson. George Simpson was born near Dumfries, Scotland, on the 12th day of November, 1823. Among the pall bearers who bore his earthly remains to Maplewood Cemetery for burial were John Jermyn, John B. Smith, G. L. Dickson, and Charles Law. The remains were followed to Maplewood Cemetery by an immense concourse of friends. The Masons and Odd Fellows, to which orders deceased belonged, turned out with full ranks. There were, besides the large procession on foot, sixty carriages in the line. Here is the obituary of George Simpson:

"Death of George Simpson./ George Simpson died of congestion or paralysis of the brain, at his late residence on Centre street, Archbald, on Saturday last at 1:15 p.m., after an illness of about ten days. He was taken sick while attending a meeting of the managers of the Pierce Coal Company, at their office in Winton, of which company he was the President. He was attended by the best medical skill but the insidious disease baffled all efforts to save him. He passed peacefully and quietly away with his sorrowing relatives and friends by his bedside. / Mr. Simpson was born near Dumfries, Scotland, on the 12th day of November, 1823, and consequently his age was 60 years, 8 months and 27 days. He came to this country with his father, the late John Simpson in 1834, and located in Carbondale. For a number of years at this place he was employed by the Delaware and Hudson Canal Company as engineer, running a stationary engine. He removed to Archbald in 1847, and there followed the same employment for the same company until the year 1857, when the coal firm of Eaton & Company was organized which was composed of Alver Eaton, George Simpson and Edward Jones. Alver Eaton died in 1874, when the firm changed to Jones, Simpson and Company. The surviving partners purchased the Easton interest, who together with James J. Williams constituted the new firm, of which Mr. Simpson was a member when he died. Mr. Simpson was a successful business man. Always honest, upright and faithful in his dealings with his fellow men, he inspired the confidence and respect of all who knew him. His sterling integrity gave him the title among his friends of "Honest George Simpson." And what nobler title can there be? He had a kind, sympathetic heart and his many deeds of kindness will not be forgotten although his manly form will be seen among us no more. He was charitable in his views, as those who knew him best will readily attest. George Simpson was a noble man. He was such a man as we very seldom meet in the walks of life. He left surviving him three brothers, Andrew and William of Carbondale, Robert of Archbald (who is connected with the firm)—a sister, Mrs. Jas. J. Williams, and a niece, Miss Jennie Eaton, and innumerable friends to mourn his death. / The funeral took place from the family residence Tuesday afternoon at one o'clock, and was attended by many people from up and down the valley. Mr. Simpson was a man widely known and respected, and his many qualities of hand and heart were witnessed in the representative business men who gathered to pay their respects as his remains were committed to their last resting place. / The services, which were conducted by the Rev. Joseph Coray, Dunmore, were impressive in their simplicity and consisted well with the unpretentious simplicity of the dead man. After a prayer and the usual form of burial service observed by the Presbyterian Church, Mr. Coray pronounced a beautiful eulogy on the successful life of the deceased, and drew therefrom some impressive lessons. The services ended with the rendition of 'Jesus, Lover of My Soul,' rendered by a quartette consisting of Mrs. Watres, Mrs. Millard and Messrs. Horace E. Hand and H. W. Kingsbury of Scranton. The remains were then taken in charge by the pall bearers, Messrs. H. S. Pierce, John Jermyn, Jere Chittenden, John B. Smith, G. L. Dickson, Alex Farnham, Charles Law and P. A. Reeves. The interment took place at Maplewood Cemetery, Carbondale, under the auspices of the Carbondale Lodge No. 249, F. & A. M., to which the deceased belonged. / The remains were followed to Maplewood Cemetery in this city by an immense concourse of friends. The Masons

and Odd Fellows, to which orders deceased belonged, turned out with full ranks. There were, besides the large procession on foot, sixty carriages in the line." (*Carbondale Advance*, August 16, 1884, p. 3)

Another Carbondale newspaper published the following obituary of George Simpson. From this second obituary, we learn that George Simpson first worked for the D&H as headman at "old No. 2 [in Archbald] where he afterwards served as engineer."

"Death of George Simpson. / Another link which binds the present with the early history of Carbondale has been removed in the person of Mr. George Simpson, who departed this life at his home in Archbald last Saturday. The deceased came to this place in 1834, the same year that Thomas Dickson did, he was about the same age and had the same land for a birthplace. The writer has a distinct recollection of the two deceased as schoolmates in the old school house which stood on the spot now occupied by the Presbyterian church. They were devoted friends all their lives, and these coincidences had a fitting termination in their contemporaneous decease. Mr. Simpson's first employment, as we recollect, was as headman at old No. 2 [in Archbald; he's in Phlibin's text as the first engineer at "Old No. 2" in Archbald], where he afterwards served as engineer. In 1847, he removed to Archbald where he was employed in the same capacity for ten years. Then the firm of Eaton & Co., in the coal business, was formed, of which he was a member. On the death of Mr. Easton in 1874, Mr. James J. Williams became a member of the firm, the name of which was changed to Jones, Simpson & Co." (a clipping in one of the Gritman scrapbooks, from a Carbondale Newspaper, August 15, 1884)

Here are two newspaper accounts of fatal accidents at the Eaton & Co. mines in Archbald, the first in 1859, the second in 1870.

On July 18, 1859, Timothy White, aged 14, accidentally hung himself when he fell from a schute, and in trying to catch the rope got it around his neck. In the *Carbondale Advance* of July 20, 1859, we read:

"July 18th, Timothy White, aged 14, was found, with a rope around his neck, hanging from a schute at Eaton & Co.'s mines. It is supposed he fell from the schute, and in trying to catch the rope, it got round his neck. There was a dislocation of the first and second bones of the neck. He was in convulsions for 3 hours, which ceased by appropriate treatment.—He also recovered to partial consciousness, and spoke several times. He died on the third night after the accident, from inflammation of the brain." (*Carbondale Advance*, July 30, 1859, p. 2)

On June 23, 1870, three miners were killed instantly when the roof of the mine suddenly fell on them. Here is the account of the accident that was published in the *Carbondale Advance* of June 25, 1870:

"**Fatal Accident at Archbald.** / A sad accident occurred in the Mines of Eaton & Co. at Archbald on Thursday morning. / The roof of the mines is supposed to have been loosened or the prop disturbed as the effect of a charge made in one chamber. This is inferred from the fact that upon the miners returning to the place where they had put in the blast, the roof suddenly fell upon them, crushing and killing instantly three of the workmen, John Atkinson, Charles Crogan, and Peter Nealon, and injuring Thomas Cafferty, the fourth man, very severely." (*Carbondale Advance*, June 25, 1870, p. 3)

1839

Eddy Creek Breaker

A D&H breaker that was located near the foot of Plane G in Olyphant.

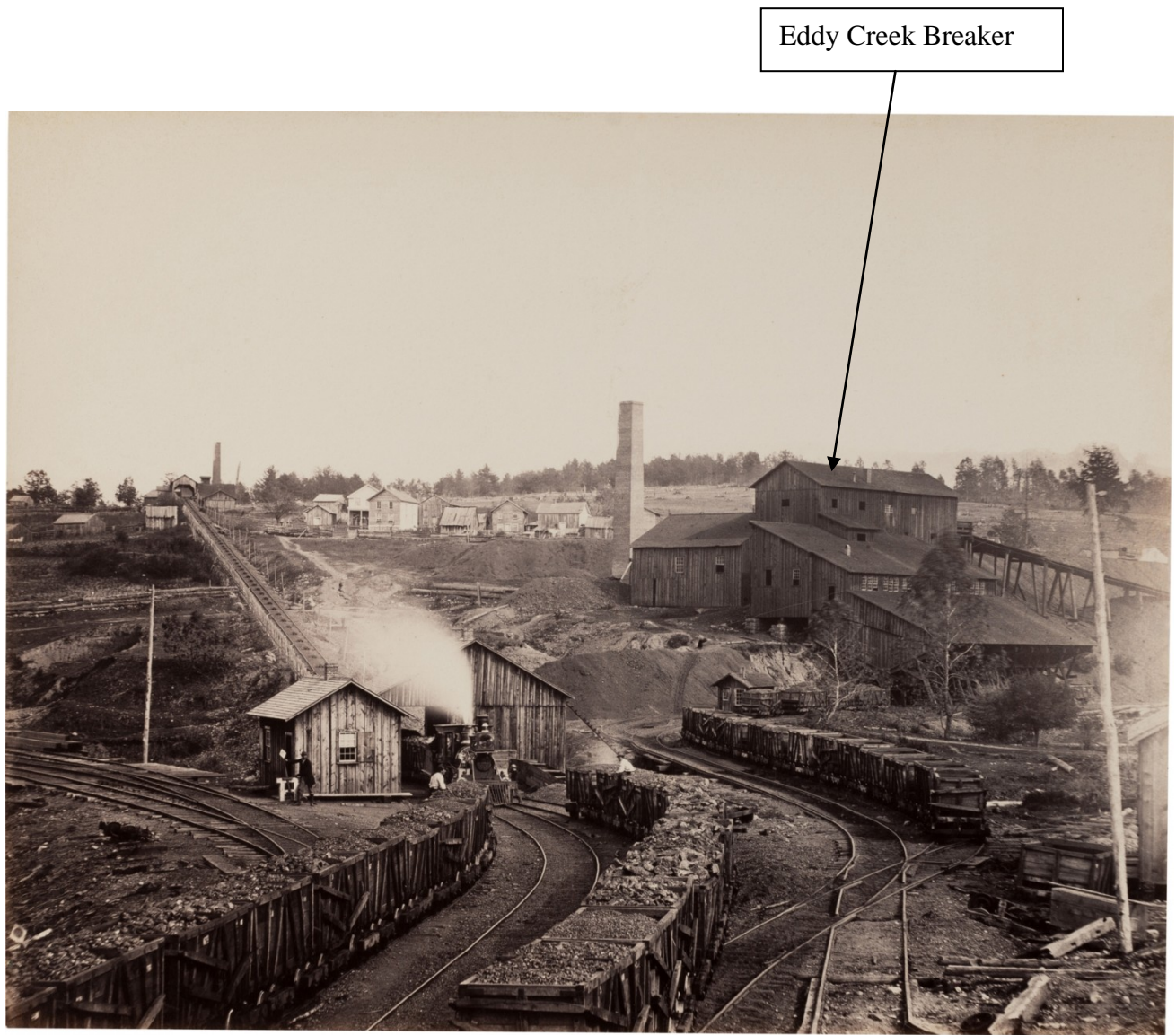
This was the second breaker on the D&H Gravity Railroad; the first was the Racket Brook Breaker.

Here is the Delaware and Hudson Canal Company section (p. 165) of Table No. 7 of the 1877 *Mine Inspectors Reports*, in which precise data are reported on the collieries owned and operated by the D&H at that time.

Delaware and Hudson Canal Company

NAME OF COLLIERY.	SHAFTS.					SURFACE SLOPES.				UNDERGROUND SLOPES.				Total depth of mines in feet.	ELEVATION.		TOTAL OPEN'GS.			
	Number of.	Length in feet.	Width in feet.	Depth in feet.	Elevation of head ab. tide-water, in feet.	Number of.	Length in feet.	Vertical depth in feet.	Elevation of head ab. tide-water, in feet.	Number of.	Length in feet.	Vertical depth in feet.	Elevation of head ab. tide-water, in feet.		Of bottom above tide-water, in feet.	Of bottom below tide-water, in feet.	Shafts.	Slopes.	Drifts and tunnels.	Number of coal breakers.
Von Storch slope,	2	{ 30 10	10	540	1,177	1	225	. . . . .	. . . . .	1	350	. . . . .	. . . . .	540	560	. . . . .	2	1	. . . . .	1
Leggett's Creek shaft,	2	{ 24 12	10	340	789	. . . . .	. . . . .	. . . . .	. . . . .	1	300	15	449	355	434	. . . . .	2	. . . . .	. . . . .	1
Marvine shaft,	1	{ 44 27	10	330	742	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	330	412	. . . . .	1	. . . . .	. . . . .	1
Eddy Creek shaft,	2	{ 27 23	10	408	782	. . . . .	. . . . .	. . . . .	. . . . .	1	450	. . . . .	. . . . .	408	377	. . . . .	2	. . . . .	. . . . .	1
No. 1 and No. 2 colliery, Olyphant,* . . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	2	1
Grassy Island shaft,	2	{ 14 24	10	170	879	. . . . .	. . . . .	. . . . .	. . . . .	2	{ 500 300	16	633	291	617	. . . . .	2	. . . . .	. . . . .	1
White Oak colliery,	2	{ 24 7	. . .	275	908	. . . . .	. . . . .	. . . . .	. . . . .	1	1,050	. . . . .	. . . . .	. . . . .	90	1,022	. . . . .	2	. . . . .	1
Powderly colliery,* . . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
No. 1 shaft and W. B. tunnel,	1	{ 11 24	11	89	898	1	450	65	998	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	80	900	. . . . .	1	1	1
No. 3 shaft,	2	{ 10 10	10	30	1,073	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	70	952	. . . . .	2	. . . . .	. . . . .	1
Coal Brook colliery,	3	{ 8 10 8	8	25	1,200	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	275	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
Totals,	17	. . . . .	. . . . .	. . . . .	. . . . .	2	. . . . .	. . . . .	. . . . .	8	400	. . . . .	. . . . .	50	1,150	. . . . .	3	. . . . .	5	1

The Eddy Creek Breaker at the foot of Plane No. 23 in Olyphant is shown in this photograph by Thomas H. Johnson that was taken in 1860:



Plane G, Olyphant. Photograph by Thomas H. Johnson

In 1880, we read the following about the Eddy Creek colliery in Olyphant:

"Jones and Co. next opened the Eddy Creek colliery, and in the spring of 1860 erected No. 1 breaker, which was completed in July of that year at a cost of \$15,000 and was the second

breaker on the gravity road [the first was at Racket Brook]. During the same year they completed No. 2 breaker, at Eddy Brook, and operated both of them until 1867, when they sold to the Delaware and Hudson Canal Company. / The Landmasser colliery was abandoned after working out the drifts, and No. 1 breaker, after standing idle several years, was burned in April, 1880. The collieries now [1880] in operation in the borough are the Eddy Creek and Grassy Island. / The Delaware and Hudson Canal Company having become the owners of Jones & Co.'s breaker, sunk a shaft four hundred and fifty feet deep. The workings extend about one-fourth of a mile from the shaft, through portions of the Hull, North and Mann Coal Company's and Delaware and Hudson lands. The Archbald and Grassy Island veins are worked. The capacity and average production of the breakers are about 600 tons daily. Two pairs of 30 horse power hoisting engines, one breaker engine of 40 horse power, and two single engines of 30 horse power each are used. The number of men and boys employed inside is 285, and outside 120. James Nicol is the inside foreman, and William Bell outside foreman." (p. 470)

The inside foreman at Eddy Brook colliery in 1877 was James Nicol, who came to America from Scotland when he as nineteen years old. In 1880, we read:

"JAMES NICOL, mine foreman, is a native of Scotland, and came to America when nineteen years old. He has been engaged in railroad contracting and mining since 1852. He became inside superintendent of Eddy Brook colliery in 1877. He married Annie Hunter, of Grassy Island, and has four children." (p. 470C)

About the Eddy Creek Breaker, we read the following in "The Breaker" by Vincent Lyons, pp. 84-85 in Bob McDonough's *Old Familiar Places A Few Tales, Tall and Otherwise*:

"Officially known as Eddy Creek Breaker, it stood on a shelf of hill overlooking a bend in the Lackawanna River as it enters Dickson City. For many years the breaker for coal mined in Eddy Creek Shaft, Olyphant Shaft and Birdseye Mine, it gave way to the more modern types of coal processing. The slate pickers left long ago and during the last few years of its life, obsolete and antique, it had been used only for crushing mine-run coal that was later to be processed elsewhere. . . / It was a dry breaker, as no water was used and the cleaning was done by hand by breaker boys. The only mechanical device besides the rollers for crushing the coal, and the shakers and screens for separating the sizes was the Harrison picker."

About Eddy Creek, we read the following in "Eddy Creek, A Requiem" by Vincent Lyons (pp. 213-17 in McDonough's *Old Familiar Places*. . .):

"We called it [the small watercourse after which the Eddy Creek Colliery was named] 'The River,' but it was not nearly large enough to be classified as a river, and was, in reality, only slightly bigger than a brook. It had its source in the swamp in a small fold of the Moosic

Mountains near Marshwood, where it was damned [sic] to make ‘Big Birdseye’ reservoir. Just below the damn [sic] it fell forty feet over a cliff, making a beautiful cascade into the rocky gorge, from there the creek meandered across the Birdseye mine property, through a valley and another narrow ravine in Throop; thence to Smoketown and the Lackawanna River. . . . My mother used to tell me that the creek was rarely dry, and except during periods of long drought there was always enough water running between its [Eddy Creek] banks for swimming or for washing clothes. For at the bend of the creek, just about where the Little League park now stands, there was a lagoon where the family laundering was done. . . . The water was clear and clean and the banks were lined with beech and hard maple trees, mountain laurel and rhododendron.”

About the coal dump/culm pile at Eddy Creek, we read the following in “The Dump” by Vincent Lyons in Bob McDonough’s *Old Familiar Places*. . . , pp. 101-103:

“Like the breaker, the dump played a very important part of our lives. Before we reached employable age we worked there—picking coal. Winter and summer it was part of our playground. . . / The dump refuse came from the breaker. Culmiferous wastes were gathered in a pocket in the breaker and later drawn off into dump cars. These cars were much larger than the ordinary mine cars, but they had a trap door at one end, similar to the trap door on the smaller car used in the mines. The dump car rested on a swivel that could be turned in any direction—completely around or up and down. It ran on a four-wheeled truck, which was pulled to the top of the plane by a small steam hoist located under the breaker. The rope was not attached to the dump car, but to a 12 by 12 inch block about four feet long. The block ran on a track laid inside the dump car track, and had four wheels. This contrivance was called a ‘bull.’ The ending would draw the bull up against the bumper of the dump car and on a signal from the footman would hoist the car to the top of the plane. The bull would stop on the crest of the plane, the car continues on to a passing branch to be snubbed and placed against the headlock by the headman. There it would wait its turn to be pulled out onto the dump to be emptied. The empty dump car was returned down the plane by a reversal of this procedure. / Two men were engaged as dumpers, with two teams of mules and two mule drivers. The dump was flat on top and fingered off into several segments towards the west and south. Each dumper had a dump of his own and worked independently, except for times when the track on either dump had to be extended, or there was a derailment. / . . . The dumper’s lot was not a happy one. He was exposed to all types of weather. In summer he roasted, the dump being a veritable Sahara with no shade, with heat and sulfur fumes radiating from the culm. In winter it was as cold as the hinges of Greenland without any protection whatever from the elements, except the dumper’s lean-to. There was a large shanty at the head of the dump, but this was miles away from where the dumper was stationed, so he fashioned a lean-to for shelter, made of planks and canvas and supported by two railroad ties. . . . The lean-to was moved along as the dump advanced. / . . . Coal picking began the day after school closed for the summer vacation, and Silsby’s Field was fast being inundated by the dump when I first began to fill my burlap bags. It [coal picking] continued until the coal

sheds were filled and during the first four or five weeks everyone worked with a will. There were no pranks or horseplay. About the middle of July, we would begin to talk of the amount of coal that was needed to fill our various sheds and bins, and as we neared the end of our summer picking chore the fun would start. . . / . . . When the [family] coal sheds were filled there was not much to be done but enjoy what was left of the summer vacation. . . / The coal shed was a coal inspector's nightmare, with a mixture of all sizes of coal from egg to pea. But it was good coal and it burned freely and hot in the old basement burner in the dining room and in the kitchen stove. It cooked our meals and kept us warm, and since we were well clothed and ate well in Smoketown in those far-away days. Our needs were fulfilled. . ."

In the above text, Lyons is speaking about the coal/culm dump in Olyphant, but what he says about that coal refuse dump applies in part or in whole to all other anthracite coal dumps/culm piles in the anthracite fields.

On April 9, 1891, Andre Corcoran and Michael O'Boyle were fooling around at the foot of one of the mine shafts in Olyphant, when the elevator caught Corcoran and scalped him and came close to killing both him and O'Boyle. The accident was reported in the *Scranton Republican* as follows:

"A painful as well as miraculous accident occurred at Eddie Creek mines Thursday afternoon and should be warning to others. Andre, son of Mr. & Mrs. Corcoran, of Dunmore street, in company with Michael O'Boyle were fooling at the foot on one of the shafts, when the elevator caught young Corcoran, who is sixteen years of age, and in the twinkling of an eye made a clean job of scalping, broke his collarbone and otherwise bruised and shook him badly. Mike O'Boyle was caught by the boot but had the presence of mind enough and opportunity to ring the signal bell, which stopped the elevator just at the point where they were both doomed for death. Nineteen stitches were necessary to hold the scalp in place on Corcoran's head and about one-half that number to repair the damage to his shoulder, while O'Boyle escaped with a trifle lameness. It is a question if Corcoran can survive." (*Scranton Republican*, April 13, 1891; reported by Bob McDonough, *Murphy*, p. 27)

James and Ralph Abbott, John Harvey, and Thomas McHale were killed instantaneously on Saturday, April 14, 1894, when twenty-five tons of solid rock fell on them in the Eddy Creek Mine. Here is the account of the accident that was published in the *Scranton Republican*, April 20, 1894:

"FOUR MEN KILLED / Eddy Creek, Olyphant was the scene of a mining catastrophe Saturday, by which James and Ralph Abbott; John Harvey and Thomas McHale were instantaneously killed, and Francis Lewis received several painful injuries about the head and body. Two contractors named Norris and Ward have been driving a headway towards the

Diamond vein in Eddy Creek mine. Two shifts are working, that of the night, under Ward, and that of the day under Norris. At 7 o'clock yesterday morning the night men left for home, and the day men commenced their labors. At 10 o'clock they prepared a blast. After it was ready they made their retreat, and the charge was fired. The five men started up to the fall when over twenty-five tons of solid rock fell upon them." (*Scranton Republican*, April 20, 1894; reported by Bob McDonough, *Murphy*, p. 27)

The worst collapse of mine workings that ever took place in the anthracite region, up to 1903, took place at the Eddy Creek Colliery in Olyphant. In the *Scranton Republican* of January 3, 1903, we read:

"Eddy Creek Colliery of the Delaware and Hudson collapses [in daylight hours] at Lackawanna and River Streets in Olyphant. Four buildings, which include a large hotel, sink fifty feet and are covered. Fire completes the work of destruction. . . It was the worst collapse of mine workings that has ever visited any part of the anthracite region, in as much as a large hotel, two double houses and a small structure were swallowed up [a ragged opening nearly half an acre in extent]." *Scranton Republican*, January 3, 1903; reported by Bob McDonough, *Murphy*, p. 30)

On Monday afternoon, July 7, 1913, David Davis and Patrick White were badly burned by an explosion of gas in the China vein of the Eddy Creek colliery. Here is the report on this accident that was published in the *Scranton Republican* of July 8 1913:

"David Davis, of Tiger Valley, and Patrick White, of Line Street were quite badly burned by gas in the China Vein of the Eddy Creek Colliery yesterday afternoon about 4:30 o'clock. The men were entering the chamber for the night shift when an explosion of gas occurred. They were burned about the face, chest and arms. Both men were taken to their homes where they received medical attention." (*Scranton Republican*, July 8, 1913; reported by Bob McDonough, *Murphy*, p. 68)

1840

Edgerton Coal Company Breaker

Edgerton was a patch town.

Here is the only photograph of the village of Edgerton and the coal operations there that is known to exist:



Edgerton Breaker

Dale E. Keklock, Archbald, has a special interest in Edgerton, and has had colorized the photograph shown above of Edgerton. That colorized photograph is now serving as Dale Keklock's business card, which is shown below.



Edgerton, East of Mayfield

History of Edgerton:

Under the authority given The Jefferson Railroad Company to build branches, a branch was built to develop the coal lands of Hosie and Park under an agreement with them dated May 28, 1883—portions of the right of way being granted by the Delaware & Hudson Canal Company and by the Northern Coal and Iron Company (see agreements dated April 1, 1884). This branch extended from a point on the Delaware & Hudson Canal Company's Railroad about two miles south of Carbondale to the Edgerton Coal Mines, about 2½ miles. It was known as the Edgerton Branch of the Jefferson Railroad [emphasis added], but did not touch that road. It was built in 1884 upon a right of way conveyed to The Jefferson Railroad Company.

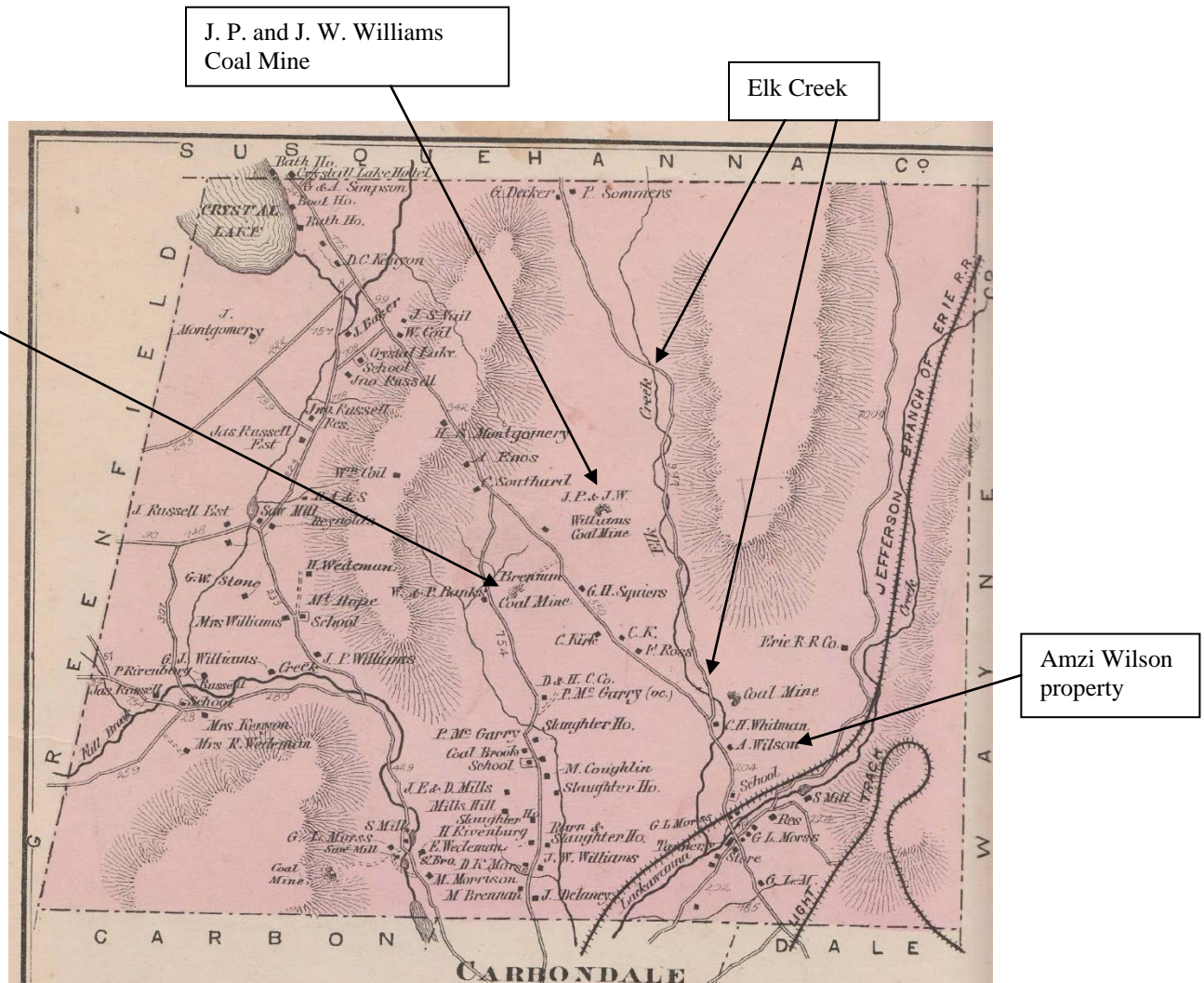
From the *Reports of the Inspectors of Mines*, p. 7, for 1887, we learn that in that year, 160,547 tons of coal were produced at the Edgerton Tunnel, Archbald Borough, Lackawanna County; also that 279 persons were employed there, together with 31 horses and mules. We also learn (p. 19) that on November 30, 1887, Jake Moon, age 18, at Edgerton, was in a non-fatal accident (leg fractured; caught between mine cars).

A substantial body of information on Edgerton is presented in Volumes XI and Volumes XVII in this D&H series.

1841

Elk Creek Breaker

There were two breakers on Elk Creek: one built in 1873 by Clarkson and Brennan, the other built in 1874 by J. P. and J. W. Williams. Both the Brennan mine and the Williams mine are shown on the map given below.



D. G. Beers map of Fell Township from Atlas of Luzerne County Pennsylvania From actual Surveys by and under the direction of D. G. Beers, 1873, p. 67. Shown on this map are Elk Creek and "J. P. & J. W. Williams Coal Mine" and "Brennan Coal Mine."

The first of the two breakers on Elk Creek was erected in 1873 by Clarkson & Brennan. In 1880 (p. 477) we read:

"Elk Creek mine, on Elk Creek, was opened and the breaker built in 1873 by Clarkson & Brennan. There is in use one engine of 30 horse power. There are employed on the inside of the mine 60 men and 5 driver boys, and 13 men and 12 breaker boys on the outside. The average production of coal from January 1st, 1880, to June 1st, 1880, was 100 tons per day. The outside foreman is Patrick Bridgett; inside foreman, John Killien; breaker boss, Patrick Smith; coal inspector, William Peel."

The second of the two breakers on Elk Creek was erected by J. W. and J. P. Williams in 1874. In 1880 (p. 477) we read:

"The Williams coal mine, on Elk creek, was opened in December, 1864, by J. W. and J. P. Williams, and the breaker was built in 1874. It has a capacity of 100 tons per day. It is run only through the winter and averages about 1,500 tons. There is one sixty horse power engine and six men are employed. John W. Williams is the superintendent. A saw-mill connected with this breaker was built in 1874, with a capacity of 10,000 feet of lumber per day."

Brennan's Mines

In 1880, we find references to two members of the Brennan family who were coal miners:

"**MARTIN BRENNAN**, miner at Coldbrook breaker mine, was born in Ireland, in 1839, and came to Carbondale at the age of five or six. He began life as a driver in the mines at twelve or thirteen. He has been twice married; to Mary Toolan and Bridget Howard." (p. 452a)

"**THOMAS BRENNAN**, coal operator and merchant, was born in Ireland, and came to Carbondale in 1842. He was mayor of Carbondale in 1879. His wife was Elizabeth Brennan, also of Irish birth." (P. 452a)

Is there a family connection between the Brennan of "Clarkson & Brennan" and Martin Brennan or Thomas Brennan?

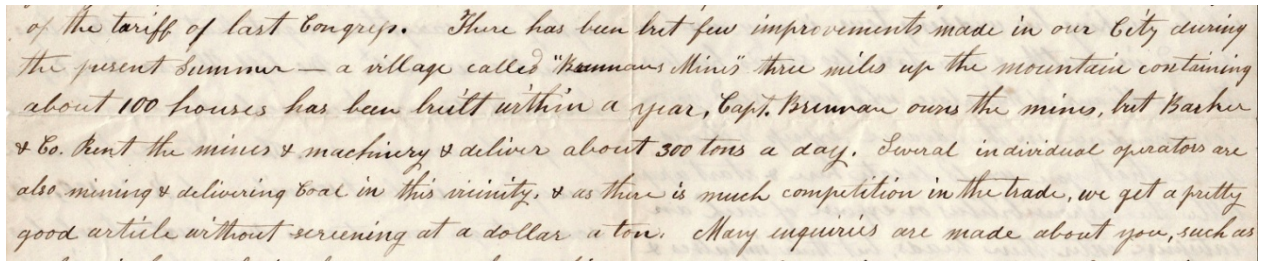
The Village of "Brennans Mines"

There is a letter in the collection of the Carbondale Historical Society from Phillips Wilson, dated Carbondale, September 30, 1861, to his son, Robert Bruce Wilson. Here are the front and back of the envelope in which the letter was mailed:



The letter, remarkably, contains information about “Brennans Mines”, located above Simpson. Here is a facsimile of the relevant section of the letter:

“Brennans Mines”:



of the tariff of last Congress. There has been but few improvements made in our City during the present Summer—a village called “Brennans Mines” three miles up the mountain containing about 100 houses has been built within a year. Capt. Brennan owns the mines, but Barker & Co. rent the mines & machinery & deliver about 300 tons a day. Several individual operators are also mining & delivering coal in this vicinity, & as there is much competition in the trade, we get a pretty good article without screening at a dollar a ton. Many inquiries are made about you, such as

Beginning in the middle of the first line and continuing to the middle of the last line, in the detail shown above, the letter reads as follows: “There has been but few improvements in our City during the present Summer—a village called ‘Brennans Mines’ three miles up the mountain containing about 100 houses has been built within a year. Capt. Brennan owns the mines but Barker & Co. rent the mines & machines & deliver about 300 tons a day. Several individual operators are also mining & delivering coal in this vicinity, and as there is much competition in the trade, we get a pretty good article without screening at a dollar a ton.”

Note: Phillips Wilson (one of the younger brothers of the celebrated Carbondale newspaper editor Amzi Wilson) is one of the sons of Sarah Phillips and Isaac Wilson. He was born in February, 1809, and died, at the age of 54 years and 8 months, on October 9, 1863. He married Frances Maria Lines on January 6, 1834. She was born on November 13, 1809 and died on October 14, 1882, at the age of 73. Both she and her husband are interred in Maplewood Cemetery, Carbondale. The letter in question was written by Phillips Wilson to his son Robert Bruce Wilson, who was then living in San Francisco, CA. Robert Bruce Wilson was born in June 1837 and died at the age of 58 on April 27, 1896. His earthly remains are interred in Maplewood Cemetery, as are the remains of his celebrated uncle, Amzi Wilson (died May 28, 1872, at age 77) and his wife (died October 21, 1882, at age 71).

On January 17, 1882, a miner by the name of Malia, who was engaged in “robbing pillars” in the Elk Creek mines, operated by the Honorable Thomas Brennan, was killed by a fall of roof. In the *Carbondale Advance* of January 21, 1882, we read:

“A miner named Malia was killed by a fall of roof in the Elk Creek Mines operated by Hon. Thomas Brennan, on Tuesday last. He was engaged in ‘robbing’ pillars at the time. The funeral took place on Wednesday.” (*Carbondale Advance*, January 21, 1882, p. 3)

On Thursday evening, January 26, 1882, the Elk Creek breaker, owned by the Clarkson estate and now run by Messrs. Brennan and Bridget, burned to the ground. In the *Carbondale Advance* of January 28, 1882, we read:

“The Elk Creek Breaker, owned as is generally understood by the Clarkson estate, and now being run by Messrs. Brennan and Bridgett was discovered to be on fire at about half past ten on Thursday evening, January 26th and was burned entirely to the ground. Some cars loaded with coal and a portion of the railroad track, to convey the coal to the Jefferson Branch were also burned. The breaker was much better than is usually erected by individual operators, and is reported to have been insured as follows:

Home of New York	\$2,500
AETna, Hartford, Conn.	3,300
La Confidance, Paris	2,500
Manufacturers, Boston	2,500
In interest of	
Edward Clarkson	5,000
Thomas Brennan	5,000
Patrick Bridgett	800

Carbondale Advance, January 28, 1882, p 3

A new breaker was built by Thomas Brennan on the site of the breaker that burned in 1882. The new breaker, in a fire that was “doubtless of incendiary origin,” burned on Sunday, March 1, 1885. In the *Carbondale Leader* of March 3, 1885, we read:

“BREAKER BURNED. / The coal breaker situated a short way above this city, owned by Thomas Brennan and operated by Messrs. Watkins, Williams & Roberts as the Elk Creek Coal Company, was burned to the ground on Sunday night. The fire was doubtless of incendiary origin [emphasis added]. There was an insurance on the building, machinery, etc., of \$4,000 in Lathrope’s agency, and \$1,000 on stock belonging to operators in Burr’s agency. The breaker was comparatively new, a former one having burned on this site about three years ago.” (*Carbondale Leader*, March 3, 1885, p.3)

In May 1890, the Frisbie Coal Company made application to court for an injunction restraining Thomas Brennan, Henry J. Brennan, William L. Brennan, and Michael Moran from interfering with or obstructing them (Frisbie Coal Co.) in their general use and enjoyment of a plot of ground known as the Elk Hill Farm located near the city of Carbondale. The nine allegations made by the plaintiffs are given in the article given below from the *Carbondale Leader*, May 15, 1890, p. 3:

“COAL MEN AT WAR. / Frisbie & Co. Against Thomas Brennan and Others. / The Frisbie Coal Co., limited yesterday made application to court for an injunction restraining

Thomas Brennan, Henry J. Brennan, William L. Brennan and Michael Moran, their agents and employes from interfering with or obstructing the said plaintiffs in their general use and enjoyment of a plot of ground known as the Elk Hill Farm located near the city of Carbondale. Court granted a preliminary injunction, making it returnable next Monday morning at 9 o'clock. James E. Burr, of Carbondale, and ex-judge Knapp, of Scranton are the attorneys for the plaintiffs. The allegations of the plaintiffs are nine in number, says *The Republican*. First, that they are a partnership association, duly organized under the laws of Pennsylvania. Second, they say that by virtue of a lease dated March 1, 1886, made by Thomas Brennan, one of the defendants, and by the other two Brennans, the interest of Henry J. Brennan and William L. Brennan having been vested in the plaintiffs, they became the owner of all the coal underlying a lot of land containing about forty acres known as the Elk Hill Farm and bounded on the north and east by lands of the D. & H. Co., on the south by lands of G. L. Morss, and on the west by lands of the D. & H. Co., it being part of the Frederick Porter tract. Together with the right to mine and remove all the coal and for that purpose to have the use of the coal breaker, barn and two story frame house, situated upon land adjacent to the tract above described, the plaintiff, however to pay certain royalties named in the lease. / The third allegation is that on September 7, 1887, Thomas Brennan, for a good consideration further agreed that the plaintiff might use the said breaker and appurtenances for the purpose of preparing other coal mined by the plaintiffs upon adjacent land. / Fourth. The plaintiff entered upon the possession of the said tract, etc., on March 28, 1877, and at the same time became the owner by purchase of all the personal property in and about the said mine and have from that time been in possession of the same. / Fifth. The plaintiff has continuously worked the mine since and has in all respect complied with the terms of the lease. All the coal underlying the tract has not been worked out and there remains one entire vein, which under the lease, the plaintiff has a right to mine. The sixth allegation and the most important one, is that on May 10, last taking advantage of the absence of the superintendent of the mine, [the defendants] came to the premises and by fraud, artifice and violence, pretended to take possession of the said mine, and interfered with the plaintiff in its enjoyment of the premises and preventing it from continuing to mine coal. The defendants have broken and removed locks with which the plaintiff secured its doors and have from that time by force, intimidation and threats entirely prevented the operation of the mine. / Allegation seventh is that on the day above mentioned the defendants entered and afterwards took possession and locked the small building in which the plaintiffs kept all their books, papers, vouchers accounts, etc. so that the plaintiffs are unable to have access to the same. / Allegation eight states that great and irreparable damage is likely to result to the plaintiffs from this action of the defendants, as during the delay which will be occasioned a forfeiture of the lease of the coal under the Morss tract is likely to result owing to a failure to mine, and the machinery of the breaker is likely to be damaged owing to a lack of care. In conclusion the allegations state that it is stated that the defendants are none of them men of pecuniary responsibility such as would render an action at law an adequate remedy for the trespass above complained of therefore the injunction is asked for." (*Carbondale Leader*, May 15, 1890, p. 3)

Elk Hill Colliery

About the Elk Hill Coal and Iron Company, we find the following in 1880 (p. 467):

"THE ELK HILL COAL AND IRON COMPANY. / This company's colliery [in Dickson City borough] was opened by W. H. Richmond & Co., in 1859; the breaker, erected in 1860, was the first on the gravity road between Carbondale and Scranton. It was operated by Richmond & Co. until 1863, when W. H. Richmond, Charles P. Wirtz, George L. Morss, Alfred Wirtz and G. L. Dickson organized the Elk Hill Coal and Iron Company, and succeeded to the ownership of the mine. The lands worked are the property of the Central Coal Company, the principal owners of which are Colonel J. H. Johnson and Abel Bennett, jr., who opened the first colliery at the Notch in 1853 and sold to the Pennsylvania Coal Company the lands that formed the nucleus of its present immense business. The vein is worked from drifts extending in one direction a mile and a half from the opening. The capacity of the breaker is 300 tons daily; average production, about 250 tons. The number of tenement houses is sixty; total number of men and boys employed, 225. One forty horse power engine is used at the breaker. / The cloven foot of Molly Maguireism developed itself in the attempted assassination of Superintendent L. E. Judd, of Richmond colliery, in 1872, and in the inauguration of strikes, the only effect of which was the injury of the participants. The efforts of Treasurer Richmond of the Elk Hill Company to prevent the unlicensed sale of liquor in the vicinity of the works have had a beneficial effect on all concerned. / The Dickson City File Works is owned by the Elk Hill Coal and Iron Company, and makes the 'top hand cut steel files.' It employs ten hands, under Foreman Thomas Sheldon, an old Sheffield file cutter, who claims to be able to equal the best work of English factories. / Besides the above named establishments, the company owns a large brick yard and a general store."

In *Portrait and Biographical Record*, pp. 245-46, there is a biographical portrait of William H. Richmond. Therein, we read the following about the Elk Hill Coal & Iron Company:

". . .The Elk Hill Coal & Iron Company, of which Mr. Richmond is president and treasurer, was incorporated in 1863 and has since become one of the most important industries of the kind in Lackawanna County, operating two collieries, with a capacity for shipment of four to five hundred thousand tons per annum. Richmond Colliery No. 3 is situated in Dickson City, near Scranton, and turns out superior anthracite coal of every size. Richmond Colliery No. 4, about five miles above Carbondale, was built in 1893, when a shaft was sunk to two veins of coal at a depth of two hundred and two hundred and twenty feet below the surface, over which was erected a steel tower, fifty-two feet square at the base, and one hundred and eighty-seven feet in height. At a height of one hundred and forty-nine feet, as the coal is raised from the mine, it is discharged from the mine car and gravitates down a steel chute, two hundred and sixteen feet, to the breaker, which is a hundred feet high, and then sixty feet to the main crushing rolls. There is a distance of two hundred feet between the shaft and breaker, in order to comply with the mine

law of the state for the safety of workmen. The culm and wastes of the colliery are taken away by a pressure blower and through an iron pipe ten inches in diameter. Shipments are made over the Richmondale branch of the New York, Ontario & Western road [this branch connected with the main line of the O&W at Northwest Junction] to the points of delivery. / . . . In May, 1842, he [W. H. Richmond] became a clerk in the store of R. H. More, of Honesdale, Pa., where he remained for three years. In 1845 he began the mercantile business at Carbondale, PA. under the firm name of Richmond & Robinson, becoming the sole owner in 1853, and for ten years he also manufactured sash, doors, blinds, coal cars, etc. / In January, 1860, Mr. Richmond commenced mining anthracite coal near Scranton under the firm name of Richmond & Co., having for partner Charles P. Wurts, late general superintendent of the Delaware & Hudson Canal Company. In 1863 the business was transferred to the Elk Hill Coal & Iron Company, with Mr. Wurts president, Mr. Richmond treasurer and manager. Connected with the business there are two stores. Mr. Richmond has bought goods continuously of the firm of Stone & Starr of New York and successors since 1845, and of the late firm of E. S. Jaffrey & Co., from 1850 until they went out of business in 1865. . ."

About the Elk Hill Coal and Iron Company and its officers, we read the following in the *Carbondale Advance* of August 3, 1867:

"Elk Hill Coal & Iron Company. / At the recent annual meeting of the Elk Hill Coal & Iron Co., G. L. Morss was elected President, and Wm. H. Richmond, Secretary and Treasurer. / The works of this company are located at Dickson, on the line of the Del. & Hud. C. Co.'s railroad, twelve miles below Carbondale, and four miles North east of Scranton. The location is an advantageous one, the coal is of good quality and the company is we believe very prosperous." (*Carbondale Advance*, August 3, 1867, p. 3)

At Dickson, a new breaker was built in 1891 by the Elk Hill Coal and Iron Company. That we know from the following notice that was published in the *Carbondale Leader* of June 10, 1891:

"1891: "The first car loaded with coal at the new Elk Hill Coal and Iron Company's breaker at Dickson is owned by the Ontario, Carbondale and Scranton company and is numbered 10,495. It was loaded stove size." (*Carbondale Leader*, June 10, 1891, p. 4)

Collieries owned by E. H. C. & I Co. in 1897: Richmond No. 3 (Dickson City), Richmond No. 4 (Richmondale).

In the article about the fiftieth wedding anniversary of Mr. and Mrs. W. H. Richmond that was published in the *Carbondale Leader*, June 5, 1899, p. 5, Richmond No. 3 and Richmond No. 4

are described as “two of the richest collieries in the anthracite coal fields. Colliery No. 3 is in Dickson City, near the palatial home of Mr. and Mrs. Dickson. Colliery No. 4 is five miles above this city [Carbondale].”

In an article that was published in the *Carbondale Leader* of January 9, 1894, Richmond No. 4 is described as follows:

“RICHMONDALE COLLIERY. / Entirely New Thing in Hoisting and Dumping Coal. / A Cut of the Works Just Above This City Which Promises to Revolutionize Present Methods.
/ The new Richmondale shaft above this city is now complete and in working order. The structure differs from anything of the kind in the coal regions and possibly in the world, the tower being constructed exclusively of wrought iron. Its height is 187 feet; width at base 50 feet, at the top []. The carriages are also constructed of iron. They are hoisted to the top of the tower and the coal from the cars is dumped into a chute from whence it is conveyed by gravitation into the breaker a distance of 206 feet. The chute through which the coal runs is four feet wide, having walks along either side of two feet in width. The pitch of the chute is four and one half inches to a foot. The pitch was found to have been too great and a number of gates have been arranged at intervals in order to prevent the coal from going into the rolls with too great a velocity. The design of the entire structure was arranged from plans conceived by W. H. Richmond, the general superintendent of the Elk Hill coal company. Whether or not the new arrangement will be a success time alone can determine. However, at present everything works like a charm with the exception of the pitch of the chute, and the indications are that it also will be a complete success. There are two veins of coal found in the shaft, one of which is eight and the other nine feet in thickness. The veins being twenty-six feet apart, the depth of the shaft is 226 feet to the lower vein. The breaker has a capacity of 1,500 tons daily. It is situated about one-half mile from the Delaware & Hudson and Ontario & Western railroads. The coal is shipped over the latter road. / The above cut and description are taken from the Scranton Republican.” (*Carbondale Leader*, January 9, 1894, p. 2)

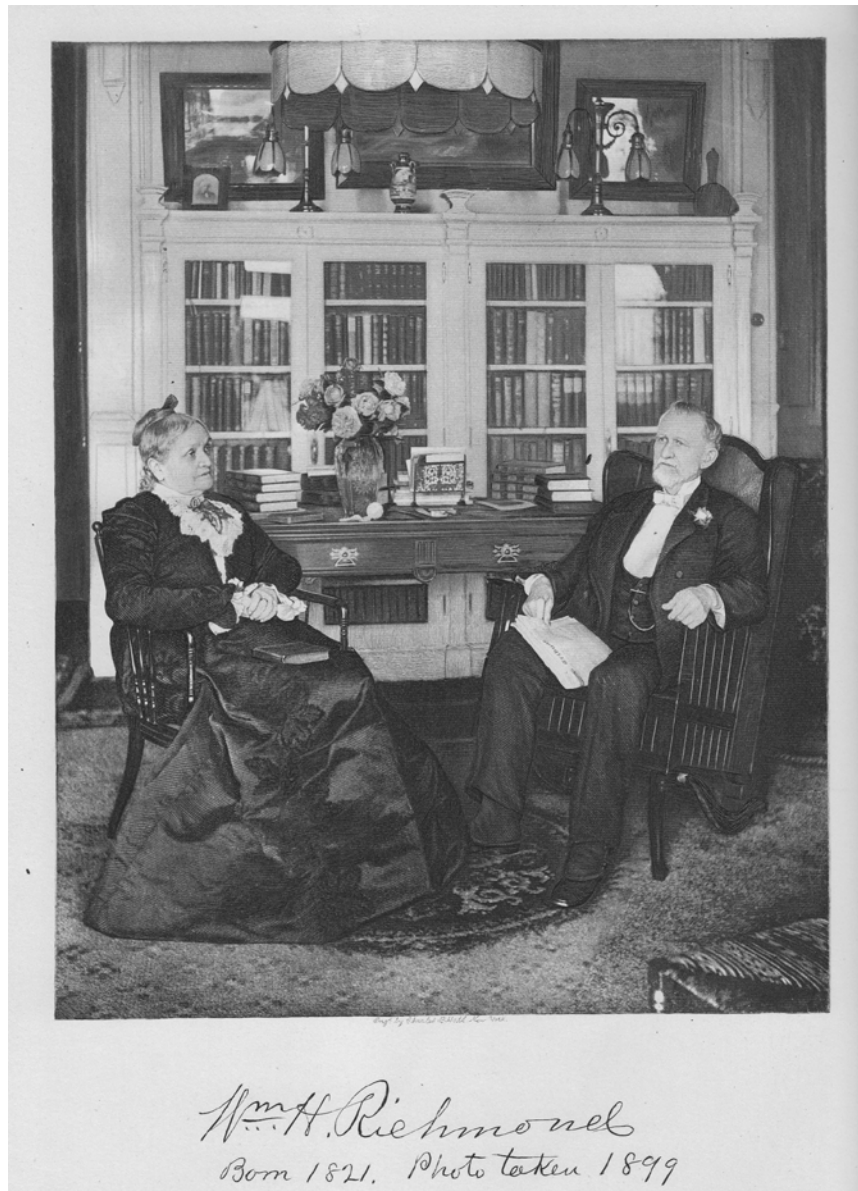
William H. Richmond’s involvement in the business of mining anthracite coal is described well in the biographical portrait of the man that is given in *Genealogical and Family History of the Wyoming and Lackawanna Valleys Pennsylvania* by Rev. Horace Edwin Hayden, Hon. Alfred Hand, and John W. Jordan, Volume II, 1906, pp. 67-71, wherein we read on pp. 70-71:

In January, 1860, Mr. Richmond commenced mining anthracite coal in Blakely township, near Scranton, under the firm name of Richmond & Co., having for partner Charles P. Wurts, late general superintendent of the Delaware & Hudson Canal Company, and in 1863 the business was transferred to the Elk Hill Coal & Iron Company, with Mr. Wurts as president, and Mr.

Richmond as treasurer and manager, but the following year Mr. Wurts withdrew, and George L. Morse, brother-in-law of Mr. Richmond, became president and served until 1880, since which time Mr. Richmond has been president of the company. In 1860 Mr. Richmond erected one of the first coal breakers on the line of the Delaware & Hudson Canal Company. Previous to this time the company had shipped their coal in lump as it came from the mine, running it over screens to clean from culm, and then commenced the practice of breaking, sorting and cleaning the coal for market. In 1883 the coal breaker was destroyed by fire, and in the following year another was built in the second ward of Scranton, near the Brisbin colliery. This was sold in 1889 and another commenced on the ground in Dickson City where the first was located in 1860. The shaft from which the coal was taken was sunk on lands of the Carter estate in the first ward, and with great difficulty and expense, it being necessary to go through some ninety feet of drift, the greater part of it quicksand, before reaching the rock. The capacity of this colliery is a thousand or more tons per day of superior anthracite coal of every size. In 1891 he made a lease of about one thousand acres of coal lands owned by the estate of the late G. L. Morss, in Fell township, about five miles above Carbondale, the following year commenced to sink shafts and build a coal breaker and works, and in October, 1893, he commenced shipping coal. This colliery has a capacity of fifteen hundred tons per day, and the product from both collieries was shipped over the New York, Ontario & Western and other roads to all the different markets. At the last named colliery Mr. Richmond conceived the plan of putting up a steel tower over the shaft which was sunk some two hundred and twenty-two feet to two veins of coal seven and eight feet thick, and connecting the tower with the coal breaker two hundred feet away by a steel chute supported on two intermediate towers. At a height of one hundred and fifty feet by automatic arrangement the carriage and car is tilted and the coal discharged into the chute and it then gravitates to the large breaking rolls, and thence through the many screens to size the same and prepare it for shipment. One man is located at the point where the carriage is tilted who takes the ticket from the car and directs the engineer, who is located in engine room in leanto of coal breaker, by a signal bell to operate the carriage which again goes to the bottom of the mine, while another

car ascends through the adjoining opening of the shaft with its load of coal. The steel tower is one hundred and eighty-seven feet high and about fifty feet square at its base. The steel chute is made necessary by reason of the mine laws of Pennsylvania, which stipulates that coal breakers must not be nearer than two hundred feet of the shaft.

Accompanying the biographical portrait of William H. Richmond in *Hayden, Hand, and Jordan* is this photographic portrait given below of Mr. and Mrs. William H. Richmond in the Library at their Home, Richmond Hill, Scranton:



Accompanying the biographical portrait of William H. Richmond in *Hayden, Hand, and Jordan* is this photograph of the residence of William H. Richmond:



RESIDENCE OF WILLIAM H. RICHMOND

Accompanying the biographical portrait of William H. Richmond in *Hayden, Hand, and Jordan* is this photograph of the Drawing Room in the residence of William H. Richmond:



DRAWING ROOM

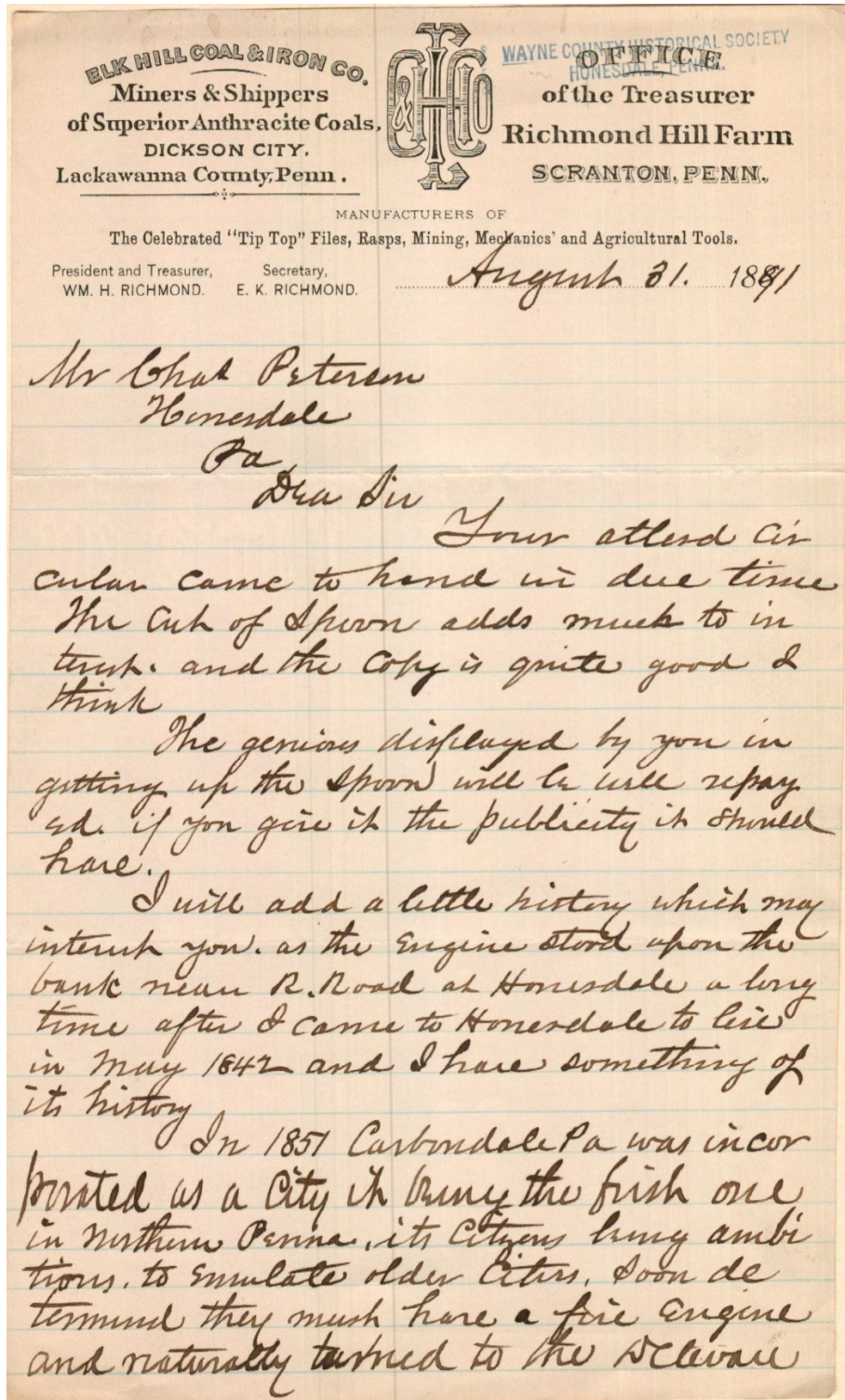
Accompanying the biographical portrait of William H. Richmond in *Hayden, Hand, and Jordan* is this photograph of the Dining Room in the residence of William H. Richmond:



In the Stourbridge Lion archives of the Wayne County Historical Society at Honesdale, there is a letter from William H. Richmond, dated August 31, 1891, to Charles Peterson, Honesdale. Here is the letterhead:

<p>Elk Hill Coal & Iron Co.</p>	<p>ELK HILL COAL & IRON CO. Miners & Shippers of Superior Anthracite Coals, DICKSON CITY, Lackawanna County, Penn.</p>	<p>OFFICE of the Treasurer Richmond Hill Farm SCRANTON, PENN.</p>	<p>Richmond Hill Farm</p>
<p>MANUFACTURERS OF</p> <p>The Celebrated "Tip Top" Files, Rasps, Mining, Mechanics' and Agricultural Tools.</p> <p>President and Treasurer, Secretary, WM. H. RICHMOND. E. K. RICHMOND.</p>			
			<p>188</p>

Here is the letter:



ELK HILL COAL & IRON CO.
Miners & Shippers
of Superior Anthracite Coals,
DICKSON CITY,
Lackawanna County, Penn.



OFFICE
of the Treasurer
Richmond Hill Farm
SCRANTON, PENN.

MANUFACTURERS OF
The Celebrated "Tip Top" Files, Rasps, Mining, Mechanics' and Agricultural Tools.

President and Treasurer, Secretary,
WM. H. RICHMOND. E. K. RICHMOND.

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and Hudson Co for assistance. and
a part of this engine was used at
their shops in making the first fire
engine in this part of the state.

The Boiler fell into the hands
of a Foundry Company at Carbon
dale and was used to make steam
up to about 1875, when it was re-
placed by a larger one. In 1876 I
was interested in securing it placed on 4 wheels.
it a Centennial Fair Philadelphia, and
offered the owners Eight Hundred dollars
for it with the view of sending
it to the Fair for exhibition, but my
offer was not accepted.

It took time
since as you may have observed it
has gone to Smithsonian Institute
Washington D.C. when it will be pre-
sented as a relic, no doubt a long
time.

Yours truly,
Wm. H. Richmond

P.S.

Please send me a half dozen
Annals. that I may send them
to friends. R-

1843

Erie Breaker

In 1888, the name *Borough of Glenwood* was changed to *Borough of Mayville*, in honor of William A. May, manager of the Hillside Coal and Iron Company; in 1890 the name *Borough of Mayville* was changed to the *Borough of Mayfield*.

In 1897 the Hillside Coal and Iron Company owned the following breakers: Clifford, Erie, Forest City, Glenwood, Keystone.

The Erie Breaker in Mayville (Mayfield) was built in 1868.

On November 16, 1886, the Erie Breaker at Glenwood, operated by the Hillside Coal and Iron Company, burned down. Here is the report on the fire that was published in *The Journal* of November 18, 1886:

“Burning of the Erie Breaker. / About midnight on Tuesday, our citizens were aroused from their slumbers by the alarm of fire energetically sounded at Davies’ Head. A bright light overspread the heavens in the direction of the southerly part of the city, but the fire proved to be outside the city limits, and the light was caused by the burning of the Erie Breaker, at Glenwood, which was operated by the Hillside Coal and Iron Company. / At about half-past 11 o’clock the watchman discovered flames issuing from the tower, and within an hour every part of the immense structure was enveloped by fire. Owing to lack of water and fire apparatus, it was impossible to check the fire, and the building was burned to the ground. The fire lighted the country for miles around, and a large crowd of witnessed the havoc of the flames as they pursued their destructive course unchecked. / All the big timbers remained in position after the boards on the outside and the planks on the inside of the building had burned. At last the timbers were brought to a red-head and the framework swayed and came down making an exceedingly picturesque scene. / When the fire broke out there were thirteen men and two drivers at work in the other parts of the colliery. One of the pump runners was startled by seeing the sheave-wheel and some timbers, the latter covered with flames, come down the shaft with astounding velocity and crash upon the bottom. He gave the alarm to the miners and other employes and they all escaped by way of the air shaft. / Fifty-one mules were stabled a few yards from the foot of the shaft. They were taken out in the morning through the Powderly mine. / The loss to the company will probably exceed \$50,000. The breaker was insured, but we have been unable to learn the amount of the insurance. Between 300 and 400 men and boys were employed at the works, which had been running on full time lately. / The breaker was built in 1868, and had a capacity of 700 tons daily. It will be rebuilt as soon as possible.” (*The Journal*, November 18, 1886, p. 3)

Less than a month after the fire, Messrs. Kingsley and Terrell, contracted for the erection of the new breaker at the Erie shaft, which will be larger than the one that burned on November 16, 1886. In *The Journal* of December 9, 1886, we read:

“Messrs. Kingsley and Terrell, the well-known contractors, have contracted for the erection of the new breaker of the Hillside Coal and Iron Company, at the Erie shaft, and W. H. Shipman, foreman for the firm, has made his appearance on the ground with a gang of carpenters, who erected a shop for their convenience on Monday. On Tuesday the lumber began to arrive on the cars, and on the same day the foreman commenced to use the square and scratch-awl on the heavy timbers, marking out the work for entering upon the construction of the new breaker, which is to be larger than the one burned. The company have entered upon the work of rebuilding with a great deal of energy.” (*The Journal*, December 9, 1886, p. 3)

In September 1887, it was announced that “the new mammoth breaker of the Hillside Coal & Iron Co. at Glenwood” was expected to be completed about January 1, 1888. In *The Journal*, of September 8, 1887, we read:

“The new mammoth breaker of the Hillside Coal & Iron Co. at Glenwood will be completed about Jan. 1st.” (*The Journal*, September 8, 1887, p. 3)

A new office building was, at the same time, erected at Glenwood at the Erie Breaker site. At the same time it was rumored, in print, in *The Journal* of September 1, 1887, that the Hillside Coal & Iron Co. would commence to pay semi-monthly in September 1887:

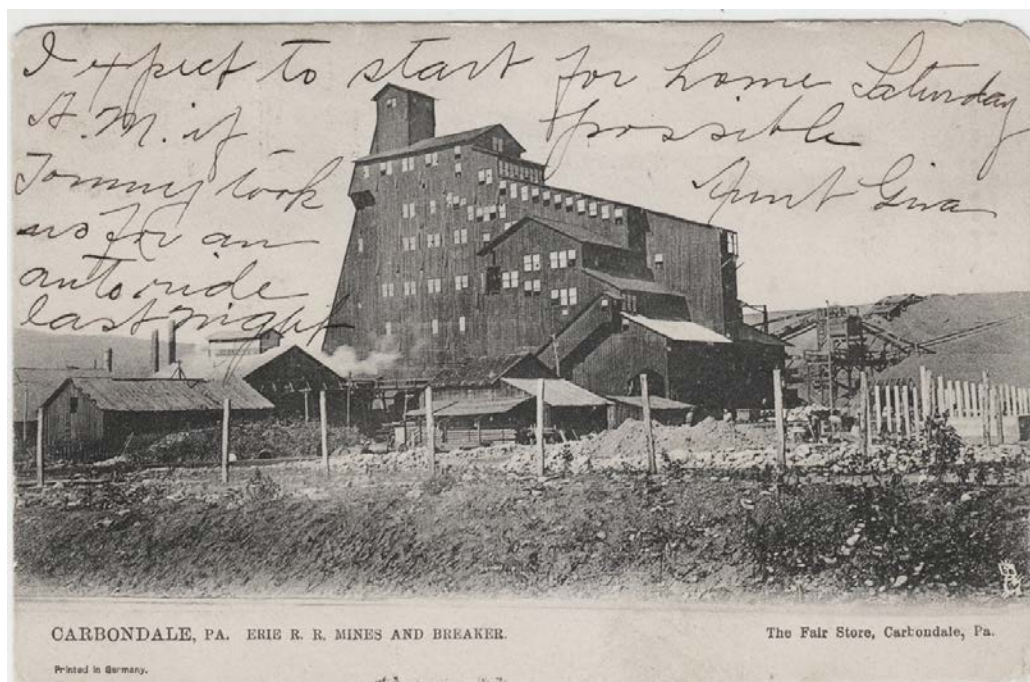
“The Hillside Coal and Iron Co. are erecting a large building for office purposes at the Erie breaker in Glenwood. / It is rumored that the Hillside Coal & Iron Co. will commence to pay semi-monthly this month.” (*The Journal*, September 1, 1887, p. 3)

On November 5, 1887, a man named Patrick Horan attempted to blow up the mule barn at the Hillside Coal & Iron Company at the Erie breaker in Mayville. Superintendent Walker and his men thwarted Horan’s attempt to do so, and in so doing saved the lives of about fifty mules. In *The Journal* of November 10, 1887, we read the following about this incident:

“A bold attempt was made to blow up the mule barn of the Hillside Coal & Iron Co. at the Erie breaker in Mayville, on Saturday night. A man named Patrick Horan, of the Fourth ward, in this city, had lately made threats to destroy the property of this company, and as he had gone down the valley and was on the war path on Saturday it was thought prudent to have a special watch, consisting of Supt. Walker, John B. Davis, Jas. Walker, John Riley, Lon Adams, stationed at

various points to guard the premises that night. About 11 o'clock, Supt. Walker, looking from the barn window, saw Horan jump the fence, gather the shavings and chips from the new addition being built, and place them in a pile against the barn, placing a dynamite cartridge with a long fuse in the chips. Before he had time to set fire to it, Supt. Walker had signalled two of his guard and they closed upon Horan. He attempted to escape but one shot from Supt. Walker's revolver, which just grazed Horan's shoulder, brought him to submission, and he was arrested and taken to Scranton, and committed to the county jail. The barn which he attempted to destroy contained about fifty mules, besides hay, grain, &c. Horan bears a reputation of a desperate character." (*The Journal*, November 10, 1887, p. 2)

Here are two copies of the same post card view of the Erie Breaker that was built 1887/1888; one in color, one black and white. Both cards are in the collection of the Carbondale Historical Society.



Directions to the Erie Breaker site: Traveling south on Lower Gordon Avenue, in Carbondale Township, at the point where the road turns to the right, under the tracks, there is a road to the left. The road to the left takes you back in to where the Erie Breaker was located. Traveling north through this same area, if you were to go straight after passing under the tracks, you would be on the dirt road back to the Erie Breaker site.

In September 1876, three hundred men and boys worked in the Erie mines and breaker, and they were paid regularly each month (unlike railroad employees at that time). In the *Carbondale Leader* of September 9, 1876, we read:

“The miners’ wages at the Erie breaker have lately been reduced ten per cent. Three hundred men and boys are employed in the mines and breaker. They are paid regularly each month, which the railroad employes are not.” (*Leader*, September 9, 1876, p. 3)

David Edwards, of Carbondale, was killed almost instantly by a fall of roof in the Erie Colliery on Monday, January 15, 1877. Here is the accident report from the *Carbondale Advance*:

“Fatal Mine Accident. / Mr. David Edwards, of this city, was killed almost instantly by a fall of roof in the Erie colliery of the Hillside Coal Co., two miles below town on Monday of this week. Deceased was a member of the Barean [sic] Baptist church, where the funeral services were held on Wednesday.” (*Carbondale Advance*, January 20, 1877, p. 3)

A detailed report on the accident in which David Edwards was killed was included in the 1877 *Reports of Inspectors of Mines of the Anthracite Coal Regions of Pennsylvania for the Year 1877*, p. 95, as follows:

“ . . . David Edwards, a miner was killed, January 15th [1877], at the Erie shaft, Carbondale township, by a fall of roof. This unfortunate man had had his cars stopped by the mine boss a few days before, for neglecting and refusing to stand props. While idle, he had attended to the propping to the satisfaction of the boss, and had been permitted to resume his work; but one of the first blasts which he fired after resuming, knocked out two of the props which he had stood, and instead of immediately restanding them he let them lay and went on with his work, and some time after, the roof fell upon him. I have my doubts as to whether he was killed by the fall or by the parties who lifted he rock off from him. His head was crushed, and it is more than probable that this was done by his rescuers lifting on the wrong side of the rock in their undue haste and excitement. I judge this to be the case from the fact, as stated by those present, that he cried out fearfully when the rock was being lifted off from him and then suddenly ceased. / The chamber was badly propped, and on going through other parts of the workings, I found great neglect in

propping manifest in every direction; and my taking Joseph Davies, the mine boss, to task for this neglect, he informed me that he could not induce the men to stand props. I found one chamber so fearfully dangerous that I ordered the laborers out of it, telling them to go home while they were able to go without assistance; and I ordered Mr. Davies to discharge the miners and not to allow them to work here any more without my consent. This was done, and after that there has been no further trouble with propping in that shaft.” David Edwards was 38, married, with two children. (*Reports of Inspectors of Mines of the Anthracite Coal Regions of Pennsylvania for the Year 1877*, p. 95)

On Tuesday, June 17, 1879, Michael Joyce was badly injured, possibly fatally, when a fuse, which he believed had failed, went off as he approached the fuse. In the *Carbondale Advance* of June 21, 1879, we read:

"Injured in the Mines. / Late on Tuesday afternoon, Michael Joyce, a miner, was fearfully injured at the Erie Colliery. / He had set the fuse, and retired at such distance so as to be out of danger. After delaying long enough for the discharge, he supposed it had failed and gone out, and he returned to place another. Unfortunately just as he approached the spot, it went off, and burned and mangled him fearfully. He is still living, but with little prospect of recovery." (*Carbondale Advance*, June 21, 1879, p. 3)

William Walker, outside foreman at the Erie breaker since 1874, was born on November 3, 1854 in Carbondale Township. In *1880*, p. 452F, we read:

"WILLIAM WALKER, Glenwood, outside foreman at Erie breaker since 1874, formerly track-layer in the mines, was born in Carbondale township, November 3d, 1854 and married Sarah Mooney, of Carbondale."

John B. Davis, engineer at the Erie Breaker, was born in Wales on December 31, 1835, and came to Carbondale in March 1869. In *1880* (p. 452B), we read:

"John B. Davis, engineer at Erie Breaker, was born in Wales, December 31st, 1835; came to Carbondale in March, 1869; was appointed to his present position in the August following, and married Jennie Price, of Carbondale."

On June 7, 1880, Edward Edmonds lost a finger as he was trying to block a runaway car in the Erie mines about two miles south of Carbondale. Here is the accident report that was published in the *Carbondale Advance* of June 12, 1880:

"Accident at the Erie / Shortly before noon on Monday, Edward Edmonds received a painful accident by having his finger amputated from his hand while in the act of trying to block a runaway car in the mines operated by the Erie Company about two miles South of this city. Mr. Edmonds is a young man about 25 years of age and of excellent character. He has many warm friends here." (*Carbondale Advance*, June 12, 1880, p. 3)

On January 21, 1882, Eugene N. Day, from Peckville, about 18 years of age, was knocked off a rail car on its way to the Erie mines by an overhead bridge and killed instantly. Here are the details on this very sad accident, as published in the *Carbondale Advance* of January 28, 1882:

"Terrible Accident. / One of the saddest accidents that it was ever our lot to record, in a newspaper service of more than a third of a century, occurred here on Saturday last soon after noon. Eugene N. Day, of Peckville, about 18 years of age, son of Mrs. Edward H. Barber, by her first husband, standing upon a train of cars that was being taken from the D & H Depot here, to the Erie Mines, two miles below town was knocked off by the timbers of a bridge overhead, run over by the cars and killed instantly. He had only been employed a few weeks as runner and coupler at that place, and seemed to be careful and cautious. But on this occasion, as they were approaching the fatal bridge, the steam from the engine came in large volumes and completely enveloped them. Very little could be seen, as older hands upon the train report, of the bridge, the train, or the hands upon it. Young Day was undoubtedly hit and stunned by a timber overhead in the bridge, and knocked upon the track, run over, and killed instantly. / His remains were taken to his home in Peckville, by a later train, and the funeral services held there on Monday afternoon. Sermon by Rev. E. P. Eldridge. A large audience attested the deep sympathy of neighbors and friends." (*Carbondale Advance*, January 28, 1882, p. 3)

On June 18, 1886, a 15-year old boy who worked at the Erie Breaker, jumped from a moving gondola car and was thrown across the rails and run over. He died about four hours after the accident. Here is the accident report that was published in *The Journal* of June 24, 1886:

"A Fatal Accident. / On Friday afternoon, about 3 o'clock, a sad accident occurred on the Del. & Hud. railroad near the iron bridge above the "Lookout," which resulted in the death of Joseph Higgins, aged 15 years, a son of Thomas Higgins, residing on the Turnpike. / Young Higgins had left school the first of the month, much against the wishes of his parents, and obtained a situation in the Erie Breaker. On the day of the accident, after finishing his day's work, he boarded a coal train which was going in the direction of his home. As the train was approaching an alley leading to the rear of his father's premises, he jumped from the gondola car on which he was riding. He retained his hold on the side of the car, and ran along the track some six or eight feet to regain his equilibrium, when his feet struck a pile of ashes, and he was thrown across the rail, between the

cars, the wheels of which passed over him, crushing both thighs near the trunk and also crushing one arm at the elbow. He was taken to his home and Dr. Bailey summoned, but surgical skill was unavailing, and he died about four hours after the accident. The funeral took place on Sunday." (*The Journal*, June 24, 1886, p. 3)

Major Montrose Barnard served at one time as chief engineer for the Hillside Coal & Iron Company. (*PABRLC*, pp. 764-65, portrait of the man)

On Tuesday, October 11, 1887, Thomas Macheecuck, a Hungarian laborer, was run over and killed by Engine 37 on the D&H railroad at Glenwood. It is supposed that he tried to cross the track ahead of the train. In *The Journal* of October 20, 1887, we read:

"The man who was run over and killed on the D. & H. railroad by Engine 37, at Glenwood on Tuesday of last week, turned out to be a Hungarian laborer. His name is given as Thomas Macheecuck. It is supposed that he tried to cross the track ahead of the train. The coroner's jury, in their verdict, exonerated the railroad company and train hands from all blame." (*The Journal*, October 20, 1887, p. 3)

In November 1887, the rails of the track from the new Erie breaker to the D&H main line were laid. Telephone lines among the Keystone, Glenwood, and Erie breakers were established. Electric lights were installed inside and outside the Erie Breaker and office. The Erie Breaker and office were connected to and a part of the modern world. In *The Journal* of November 10, 1887, we read:

"MAYVILLE. / The rails of the track from the new breaker to the D. & H. main line are being laid. / The Erie breaker is now connected with the Keystone and the new Glenwood breakers by telephone. / John Grant, agent of the Thompson Houston Electric Co., is placing electric lights in the Erie breaker, and office. There will also be three arc lights outside the works and one at the barn." (*The Journal*, November 10, 1887, p. 2)

Mayville, too, would be connected to and a part of the modern world: it would be lighted by electricity from the plant of the Hillside Coal and Iron Company at the Erie breaker. In *The Journal* of January 5, 1888, we read:

"Mayville is to be lighted by electricity from the plant of the Hillside Coal and Iron Company at the Erie breaker." (*The Journal*, January 5, 1888, p. 3)

On March 13, 1888, Richard Henwood and Peter Steele were killed at No. 2 shaft of the Hillside Coal & Iron Company at Glenwood when a bucket containing earth and stones fell on them at the bottom of the shaft. In *The Journal* of March 15, 1888, we read:

“Richard Henwood was instantly killed, and Peter Steele fatally injured at No. 2 shaft of the Hillside Coal & Iron Company, Glenwood, on Tuesday afternoon. A bucket containing earth and stones, which was being hauled up the shaft, became detached from the rope when near the top and fell to the bottom with the above result. Steele died on Wednesday morning. Henwood leaves a wife and one child. Steely [sic] was unmarried.” (*The Journal*, March 15, 1888, p. 3)

In the Erie mine at Mayville, there was a blacksmith shop. Michael Cook of Carbondale was the smith. Unlike other blacksmith’s furnaces, the forge at the Erie was blown by steam. The steam created a vacuum and hot air was sent through a pipe toward the forge. The pipe through which the air passed was laid under a stream of cold water and when the air struck the fire it was cooled and made a perfect cold blast. That unique invention was a result of the combined brain work of William Walker, foreman for the company, and John B. Davis. That invention was used in nearly every shop of the Hillside Coal and Iron Company and was adopted by other companies as well.

The innovative blacksmith shop at the Erie breaker was only one of several remarkable time-saving inventions in operation there. The valuable and innovative devices are described in the following article that was published in the *Carbondale Leader*, October 21, 1889. p. 3:

“TIME-SAVING INVENTIONS. / How the Erie Mine Has Been Supplied With Valuable Devices. / Originality, wherever found, is something to be commended, even if found among the employees of coal companies. Some companies, however, fail to notice this quality in their employees, but the Hillside Coal and Iron Company is not to be numbered with these. There is probably no mine in the valley which can boast of so many original devices as the Erie Mine at Mayville. The electric locomotive is not the only original thing about the mine, says The Scranton Truth. Another thing not to be found in many other places is the blacksmith shop in the mines. It is indeed a weird picture to stand in the darkness along the road and look up into the cavern where the smiling smith, in the glare of the furnace and the light of an incandescent lamp, diligently works at his anvil. The reflection of the light upon the rugged-roof and the bright surface of the coal, while the rays are absorbed in that absolute darkness found only in the mine, furnishes a strange spectacle. The forge of the Cyclops as they shaped the thunderbolts of Jove beneath Mount Etna, could not be more unearthly in appearance than the underground forge at Mayville. Michael Cook, of Carbondale, is the smith at the Erie, and a busy smith is he. / Unlike other blacksmith’s furnaces, the forge at the Erie is blown by steam. The steam creates a vacuum and hot air is sent through a pipe toward the forge. The pipe through which the air passes is laid under a stream of cold water and when the air strikes the fire it is cooled and makes a perfect

cold blast. The unique invention is a result of the combined brain work of Wm. Walker, foreman for the company, and John B. Davis. This invention is used in nearly every shop of the Hillside Coal and Iron Company and is being adopted by other companies as well. / There is an arrangement at the head of the breaker by which the empty cars are pulled off the dump by a chain which is wound around a cylinder, geared by belts from the engine room beneath. By this means the time of dumping is diminished one-half. To John Grady, the inside foreman, is due this invention. There is a hydraulic arrangement at the bottom of the shaft which by water power lifts up the carriage to a height from which the empty car is automatically removed from the carriage. Wm. Walker is superintending the construction of this. / There is also a Knowles pump, put in by the Thompson-Houston Company, of Boston, in the mine, which is capable of discharging 650 gallons of water a minute. Patrick McDonnell operates this pump in an apartment lighted by electricity. / The company has just completed a plane 450 feet long, the incline of which is 20 degrees. They have another 1,050 feet in length nearing completion. The construction of both planes is of course superintended by Mr. Grady. Altogether the mine is the most complete one found in the anthracite regions of Pennsylvania.” (*Carbondale Leader*, October 21, 1889. p. 3)

In the 1910 *Report of the Department of Mines of Pennsylvania*, Part 1, we read the following about the Erie Colliery:

“Erie Colliery—The colliery has been shut down since August on account of extensive repairs to the breaker. The result will be better preparation and a larger output. New shaking screens and patent pickers are being added. / The shaft was overhauled, new buntings and guides placed, also new carriages installed. The East side fan was remodeled and rebuilt entirely on the old foundation.”

Hosie & Parke Breaker, two miles east from Glenwood (Mayfield):

From an article in the *Carbondale Leader* of August 15, 1884, we learn of the existence of the Hosie & Parke Breaker. Therein, we read:

“Messrs. Hosie & Parke have recently completed a large breaker about two miles in an easterly direction from Glenwood, up the mountain side, where they have a tunnel opening, and have found excellent coal. They have built a railroad to connect with the D. & H. at the Erie breaker. They will commence delivering coal next week, and expect to produce daily about 800 tons. The firm is composed of two enterprising young men who have the capital and experience to make their venture a success.” (*Carbondale Leader*, August 15, 1884, p.2)

Esgro Coal Company Colliery

There are two pay roll statements from the 1940s; both in the Marian Stratford collection of the Carbondale Historical Society, from the Esgro Coal Company Colliery. Those statements are shown below.

LABORER'S PAY ROLL STATEMENT

Two Weeks Ending _____ 194__

Esgro Coal Co. Colliery # *1 Slope*

Ticket No. _____ Employee's Name *Hubert Wavershak*

C O A L			Total Due
No. Cars	Price	Allowance	
			\$120.00
COMPANY TIME			
No. Hours	@		
DEDUCTIONS			
O. A. B. Tax	<i>Last pay</i>	<i>1.08</i>	
Victory Tax		<i>13.00</i>	
Lamp Charge			
Coal & Delivery			
Union Dues			
Payment on War Bond			
Mid Valley Welfare Donation			
Totals			<i>14.28</i>
Subtract Deductions			<i>14.28</i>
Total Due			<i>105.72</i>

NOTICE—When check is made for Last Amount in right hand column, it shall be conclusive evidence of settlement in full for two weeks above mentioned, and automatically disposes of any shortage claims.

COMPANY RECEIPT

Total Earnings - - - - \$ *120.00*

Total Deductions - - - - \$ *14.28*

Amount Due - - - - \$ *105.72*

Sign Here _____

Esgro Coal Co.
Colliery #1 Slope

LABORER'S PAY ROLL STATEMENT

Two Weeks Ending **JAN 29 1944** 194--

Joe Esqps Coal Co Colliery

Ticket No.----- Employee's Name

Hubert Vaverchak

COAL

No. Cars	Price	Allowance		Total Due
				\$

COMPANY TIME

No. Hours	@		
<u>dozp</u>		<u>S. W. D.</u>	<u>9.10</u>
<u>13</u>	<u>6.30</u>	<u>Overtime</u>	<u>7.00</u>
			<u>81.90</u>

DEDUCTIONS

O. A. B. Tax	<u>.98</u>	
Victory Tax	<u>5.00</u>	
Lamp Charge		
Coal & Delivery		
Union Dues		
Payment on War Bond		
Mid Valley Welfare Donation		
Totals	<u>5.98</u>	<u>98.00</u>
Subtract Deductions		<u>5.98</u>
Total Due		<u>92.02</u>

NOTICE—When check is made for Last Amount in right hand column, it shall be conclusive evidence of settlement in full for two weeks above mentioned, and automatically disposes of any shortage claims.

1845

Everhart Coal Company

James M. Everhart was the president of the Everhart Coal Company. (*PABRLC*, p. 749)

1846

Fairlawn Breaker

In 1873, John Robertson, Esq., who held a position in the Real Estate office of the Delaware and Hudson Canal Company for about five years, formed a partnership with Messrs. John Hosie and J. P. Hosie for working the Fair Lawn Colliery—Jones tract—in Scranton. That we know from the following article that was published in the *Carbondale Advance* of May 31, 1873:

“Removing from Town. / John Robertson, Esq. who has held a position in the Real Estate office of the Del. & Hud. C. Co. here for about five years, as local agent, surveyor &c., and latterly been in charge of the conveyancing and records at the Providence office, has resigned the position which he has filled with great acceptability. / Having sold his real estate here, as before reported, in our columns, to T. R. Lathrop Esq., and having made arrangements to enter into the coal business at Scranton, he proposes to remove next week to Green Ridge. / He has formed a copartnership with Messrs. John Hosie and J. P. Hosie for working the Fair Lawn Colliery—Jones tract—in Scranton. The coal is of excellent quality, already opened, and conveniently located for local sales. The Clark vein—8 feet in thickness—is found in great purity upon the tract, and underlying it at a depth of 60 feet another vein of about the same thickness. We wish them great success. / In the removal of Mr. Robertson, we lose a valuable citizen, one of excellent attainments, and whose influence in the community has been altogether salutary. . .” (*Carbondale Advance*, May 31, 1873, p. 3)

The Fairlawn Breaker was built by John Hosie in 1872, and operated by him until his death, and by his sons afterward. In the spring of 1883, H. W. Linderman, of Buffalo, and Donald Sauerwine purchased the breaker and mined coal under a lease from Hon. Lewis Jones, of New York. The Fairlawn barn and breaker burned on Tuesday, September 18, 1883, “probably from being set on fire,” said the *Carbondale Advance* of September 22, 1883:

“Breaker Burned. / The barn and breaker of the Fairlawn colliery at Scranton were burned on Tuesday night, probably from being set on fire. The breaker was near the D. & H. Railroad track and the Sand Banks. / The breaker was built by John Hosie in 1872, and operated by him until his death, and by his sons afterward until the present owners, a company of which H. W. Linderman, of Buffalo, is President, and Donald Sauerwine, who was injured there a few days ago, is Secretary and Treasurer, purchased it last spring, and they have been mining coal under a

lease from Hon. Lewis Jones, of New York. The accident of the other day caused a temporary cessation of work, but the repairs had been about completed when the fire occurred. When the structure will be rebuilt cannot now be definitely stated, but that the work of erecting another breaker will be begun as soon as the insurance is adjusted, there is no question. The building was insured for \$20,000 with the Frothingham agency, and the insurance will cover the loss.” (*Carbondale Advance*, September 22, 1883, p. 3)

Conductor Cook’s passenger train from Scranton to Carbondale ran off the track near the Fairlawn breaker as it was backing down from Green Ridge to Scranton on February 2, 1888. Two hours were devoted to getting the train back on the track, which meant that the first train to Carbondale from Scranton arrived at 9:40 A.M. (and not at 7:50 A.M., as scheduled). In *The Journal* of February 2, 1888, we read:

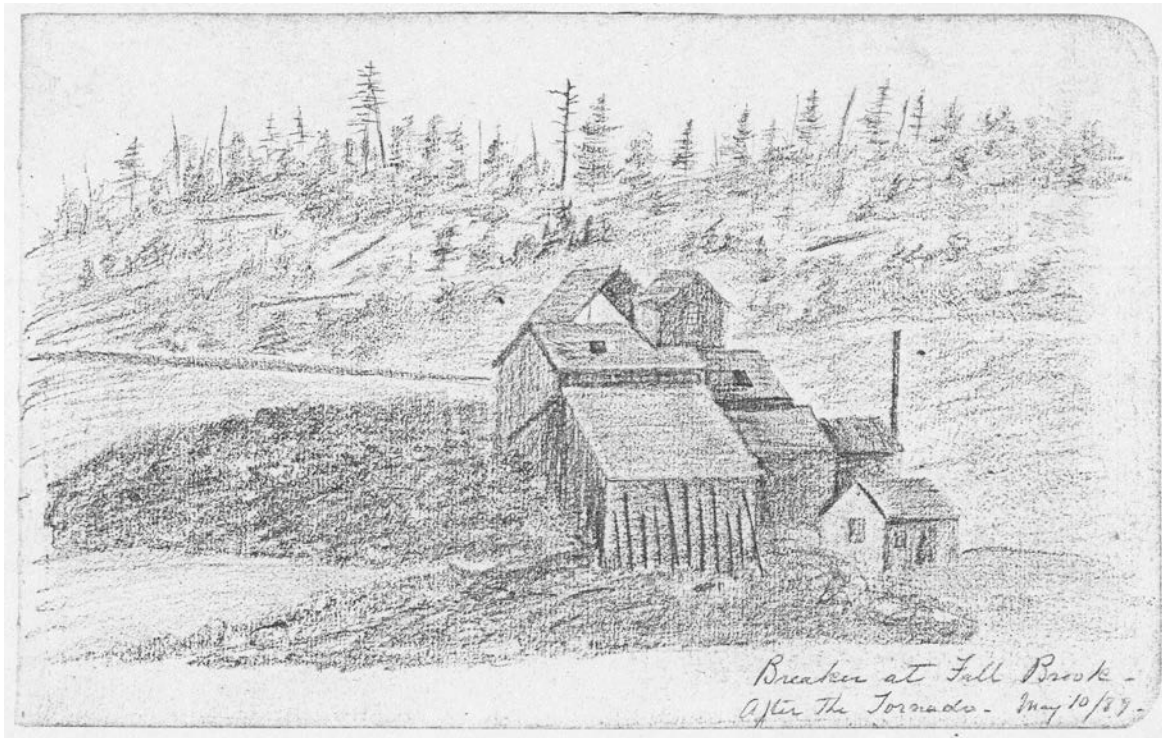
"While the passenger train, Cook conductor, which arrives here at 7:50 a. m., was backing down from Green Ridge to Scranton just before seven o'clock this morning, the locomotive ran off the track near the Fairlawn breaker, and two hours were devoted to getting it on again. Hence the first train to this city from Scranton arrived at 9:40 a. m." (*The Journal*, February 2, 1888, p. 3)

1847

Fall Brook Colliery

In the biographical sketch of James Russell that was published in *Portrait and Biographical Record of Lackawanna County, Pennsylvania* (1897), we read, on pages 960-61, the following: “He was enterprising and his efforts were not confined to agricultural pursuits. For a number of years he operated the Fall Brook Colliery and the delivery of the Delaware and Hudson coal in the city of Carbondale. . .”

Shown below is the “Breaker at Fall Brook – After The Tornado – May 10/ 89” from the M. B. Ricker sketch book titled “Carbondale Sketches – Summer of 1889 M. B. Ricker,” in the collection of the Russell Homestead, Carbondale.



“Breaker at Fall Brook – After The Tornado – May 10/ 89” by M. B. Ricker

“Murrin's Colliery, Fall Brook Coal Co. The breaker prepares buckwheat and pea coal wet and all larger sizes dry, the washery not being used at present. About 80,000 gallons of mine water are needed per day for washing 100 tons of coal, and all slush and waste water run down the road direct to Fall Brook.”(John V. Buberniak)

In the twenty-first anniversary edition of *The Carbondale Leader*, May 18, 1893, on the question of “coal operations,” we read: “Fallbrook levels 1, 2, and 3 were opened in 1846 and abandoned in 1857.”

1848

Filer Breaker

"The Filer Breaker.--This colliery, on the Elizabeth Rought track, was erected in 1874. The first coal was shipped in May, 1875. George Filer and Thomas Livy were the builders and are the owners. When working to full capacity about 500 men and boys are employed. The capacity of the breaker is about 800 tons daily; production about 600. Five pumps are worked in the mines and three pairs of stationary engines. The veins worked are the Archbald, with an average dept of seven feet, and the Grassy Island, averaging twelve feet. Workings extend through portions of the Jessup tract, owned by the firm[,] the Bell tract, owned by the Hillside Coal Company; the Rought tract, owned by Winton & Dolf, and the Dana tract, owned by W. W. Winton and others. The firm has thirty-five tenant houses and a large store for supplying its men. The outside foreman is F. K. Taylor, the inside foeman R. D. Roberts."

1849

Finn Coal Company Breaker

The Finn Coal Company Breaker was located east of the Belmont section of Carbondale. Photo of breaker in clipping in Gritman scrapbook, dated June 30, 1908

1850

Forest City Breaker

The Forest City Breaker was owed by the Hillside Coal and Iron Company.

"Forest City Colliery.—A rock tunnel was driven 7 by 10 feet in section and 275 feet in length, to serve for a second opening for the "Ring" vein. A new 16-inch bore-hole was put down a depth of 225 feet, located 540 feet east of the shaft, and a 12-inch casing pipe inserted, to get rid of the excess water from the 2nd and 3rd Dunmore veins in rainy seasons. The same kind and size of bore-hole was put down near the Forest City Washery to supply the washery with water from the mine. One new 7 ½ ton cable reel electric motor was installed for the purpose of increasing the output. / The fan and air shaft at No. 2 Shaft are undergoing extensive repairs which have not yet been completed. A new concrete locomotive house was built, size 45 feet 2 inches x 57 feet 3 inches." *Report of the Department of Mines of Pennsylvania*, Part 1, 1910:

This colliery operated from 1876 to 1945, and in those years produced 20.2 million tons of anthracite, including 668,000 tons in the peak year of 1911.

For a list of fatalities at the Forest City Colliery, see *Walsh*, pp. 17-21

This was a 'wet' breaker (water used to clean and separate coal).

The Forest City colliery occupied all of the east side of the 400 block of Railroad Street, a tract of equal size south of South Street, and most of the backyards of dwellings on the 300 block of Main Street. It was the largest colliery north of Carbondale. As many as 1,200 men and boys worked here; 158 of whom were killed there.

The clothing that John Harlow was wearing as he worked in a breaker in Forest City on Monday, March 21, 1887, got caught by a rapidly revolving shaft and he was pulled into the machinery and killed. At age 16, he was the only support of his mother, a widow, and two sisters. Here is the report on this tragic accident that was published in the *Carbondale Leader* of March 22, 1887:

“A HORRIBLE DEATH. / John Harlow, of Forest City, Caught in the Breaker Machinery. / FOREST CITY, March 22--Yesterday afternoon John Harlow, a boy about sixteen years of age, met with a horrible death. While going around among the machinery in the breaker his clothing was caught by a rapidly revolving shaft and before the machinery could be stopped he was so badly injured that he lived but a few moments after being extricated from the shafting. Both of his legs were broken near the ankles, and blood was running from his nose and mouth showing that he had been internally ruptured. Harlow, although only sixteen years of age, was the only support of his mother, a widow, and two sisters.” (*Carbondale Leader*, March 22, 1887, p. 4)

In the *Reports of the Inspectors of Mines*, 1887, p. 2, we read:

“*Hillside Coal and Iron Company—Forest City Mines.*—The shaft reported as being sunk 160 feet to bottom vein in last year’s report (1886), has reached a depth of 199 feet. Suspension of work for some months accounts for it not being finished. Work is now going rapidly forward to completion.”

In the *Reports of the Inspectors of Mines*, 1887, we read

on p. 15:

April 8, John Harris, age 47, and Thomas Watkins, age, 40, both working at Forest City No. 2 colliery, H. C. & I. Co., Clifford Township, Susquehanna County, were both in a non-fatal accident (both seriously injured; fall of roof slate. Harris leg broken; Watkins seriously bruised about the body).

on p. 18:

October 17, John Eicholzer, age 15, working at the Forest City Colliery of the Hillside Coal and Iron Company at Forest City was in a non-fatal accident (leg broken; caught by car in mines).

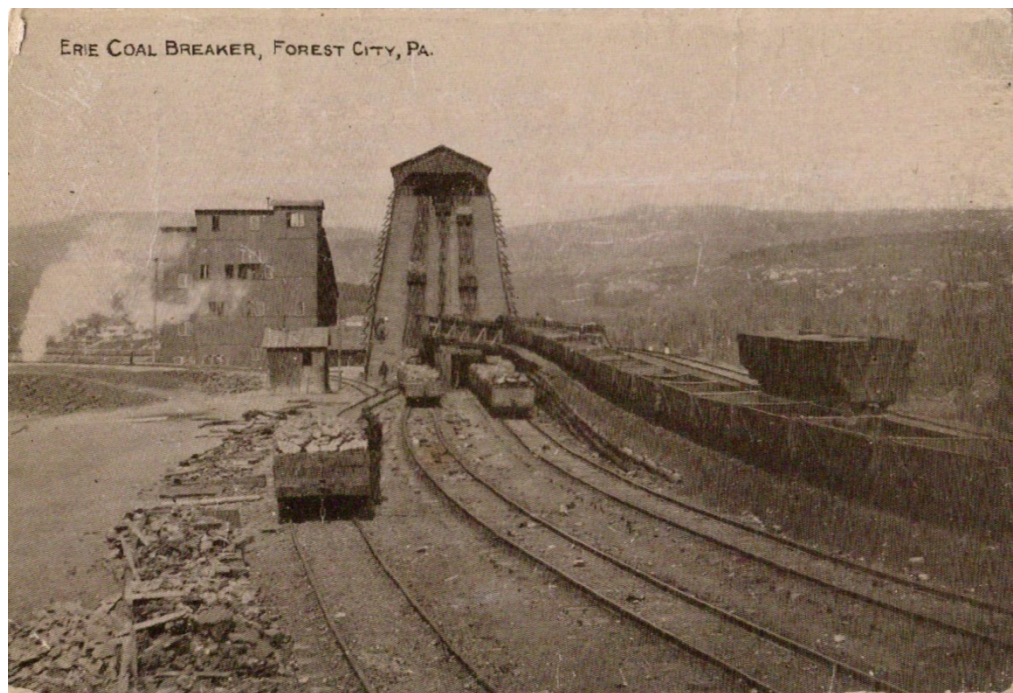
Daniel Melvin was seriously hurt at the Hillside Coal Company's breaker in Forest City on July 11, 1892 when the trestling that he was working on fell to the ground. Here is the report on the accident that was published in the *Carbondale Leader* of July 12, 1892:

“FELL FIFTY FEET. /Daniel Melvin’s Experience at Forest City. / A serious accident occurred at the Hillside Coal Company’s breaker in Forest City yesterday afternoon about 3 o’clock. The trestling over which the coal is taken into the breaker was being repaired and a number of men were engaged in the work. The frame work supports the road on which two tracks are maintained. During the progress of the repairs the breaker was kept at work and coal cars were passing regularly over the trestling. Six men were at work upon the repairs yesterday afternoon and sixteen mine cars were standing upon the tracks when suddenly a section of the frame work gave way and toppling over the cars were precipitated to the ground fifty feet below. One man, Daniel Melvin, was on the trestling at the time and went down with the falling timbers. The other men heard the creaking of the frame and managed to escape. / Mr. Melvin’s injuries are serious although not necessarily fatal. All the employes had a narrow escape from instant death as the falling coal and cars covered the spot where they were at work when the warning sounds led them to seek a place of safety.” (*Carbondale Leader*, July 12, 1892, p. 4)

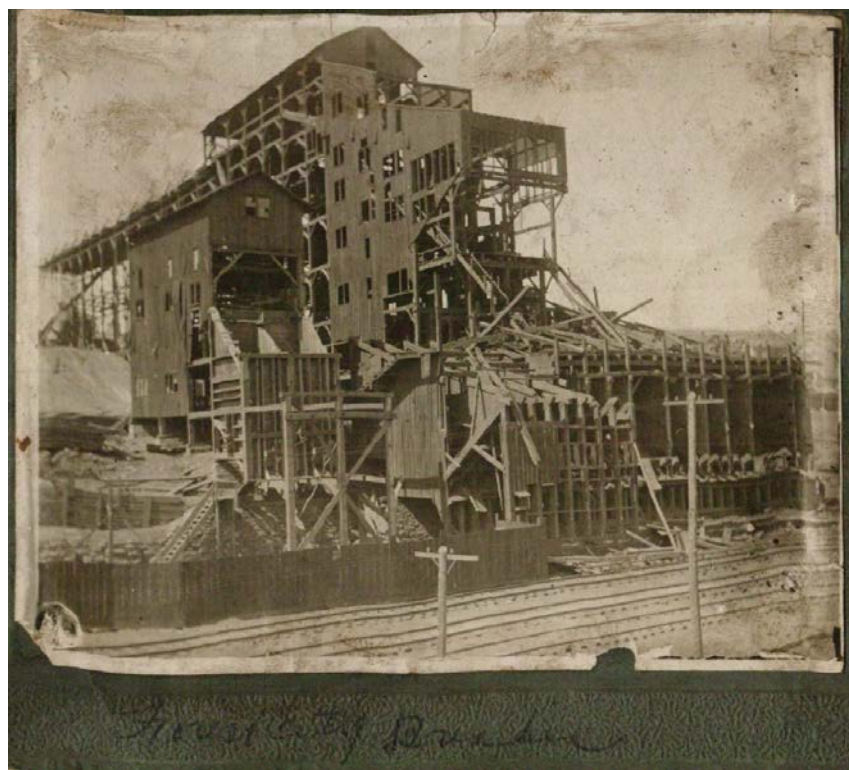
The originals of the photographs of the Forest City Breaker given below are all in the holdings of the Forest City Historical Society. This breaker was sometimes called the Erie Breaker in Forest City, and sometimes called the Forest City Breaker. These photographs were made available for publication here by Peggy Brager on May 31, 2017:



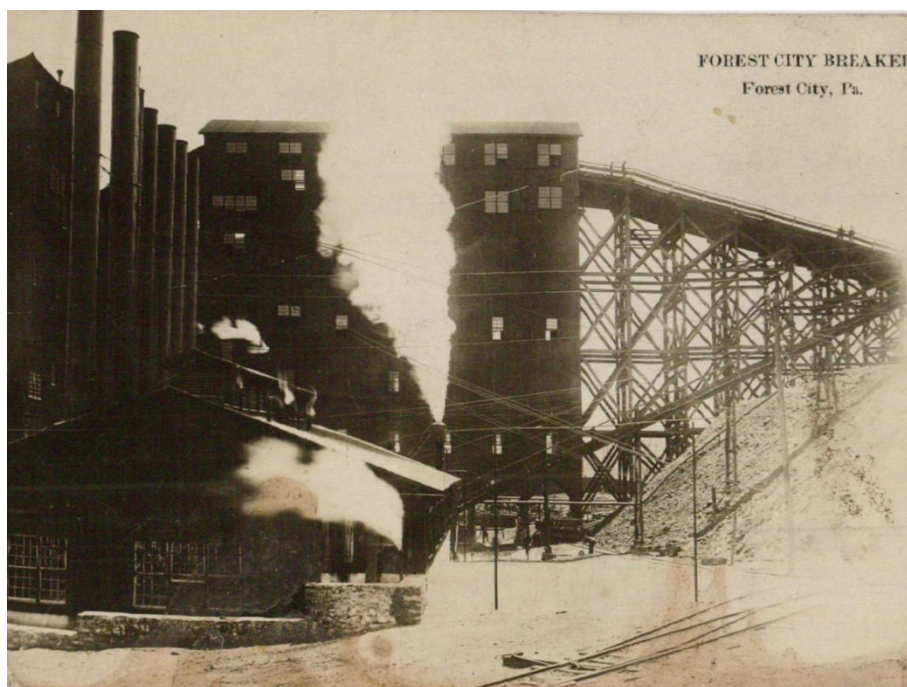
Erie Breaker, Forest City, PA.



Erie Coal Breaker, Forest City, Pa.



Forest City Breaker, Forest City, Pa.



Forest City Breaker, Forest City, Pa.

Shown below are two generic breaker post cards in the holdings of the Carbondale Historical Society. On the face of the one is printed: "Breaker and Culm Piles. / Forest City, Pa." The same view could just as easily have been marketed as "Breaker and Culm Piles. / Nanticoke, Pa."



Back:



Front:



Back:



1851

Forest Coal Company Breaker

The Forest Mine Colliery was operated by the Forest Mining Co., Archbald.

The Forest Coal Company breaker, which the *Carbondale Leader* identified as “one of the oldest breakers in the valley,” burned on May 19, 1899. The breaker was shut down around 1893, and was not active after that time. In the *Carbondale Leader* of May 20, 1899, we read:

“OLD BREAKER BURNED. / Forest Coal Co’s. Plant at Archbald Destroyed Last Night. / Shortly before 8 o’clock last evening the old breaker owned by the Forest Coal company, situated in Archbald, was discovered to be on fire. The flames spread very quickly and a few minutes after the alarm was sounded the breaker was a mass of flames. / The fire started in the engine house and soon spread to the other parts of the breaker. The origin of the fire is not known. The breaker was shut down about six years ago and had not resumed operations since. It was one of the oldest breakers in the valley.” (*Carbondale Leader*, May 20, 1899, p. 5)

In July 1899, a new vein of coal was found on the Hackley tract in Archbald. The vein of coal was a particularly good one as it consisted of six feet of clear coal. When the coal was mined, it was taken to the Raymond breaker at the Ridge and then prepared for market. About this new vein of coal, we read the following in the *Carbondale Leader* of July 31, 1899:

“NEW VEIN OF COAL / Will Be Mined by the Forest Mining Company. / Miners in the vicinity of Archbald will be pleased to hear that the Forest Mining company is about to begin mining from a six feet vein of coal, discovered but a few days ago. In view of the fact that the Delaware and Hudson mines are not working on account of the burning of the White Oak breaker, this is particularly good news. / The opening will be made on the Hackley tract, a little beyond the culm pile on the west side of town. Several attempts were made to strike the vein but this was not accomplished until last week. The vein is a particularly good one as it consists of six feet of clear coal, perhaps the best to be found in the borough. The vein is supposed to exist in two hundred acres of the tract. / When the drift from which the coal will be taken is in operation the coal will be taken to Raymond breaker at the Ridge and then prepared for market. The working of the drift will give employment to many men and boys.” (*Carbondale Leader*, July 31, 1899, p. 2)

1852

Franklin Coal Company Breaker

The Franklin Colliery was operated by the Franklin Coal Co., Winton.

1853

Frisbie Coal Company

In the *Carbondale Evening Leader* of August 31, 1891, we read the following about the Frisbie Coal Company:

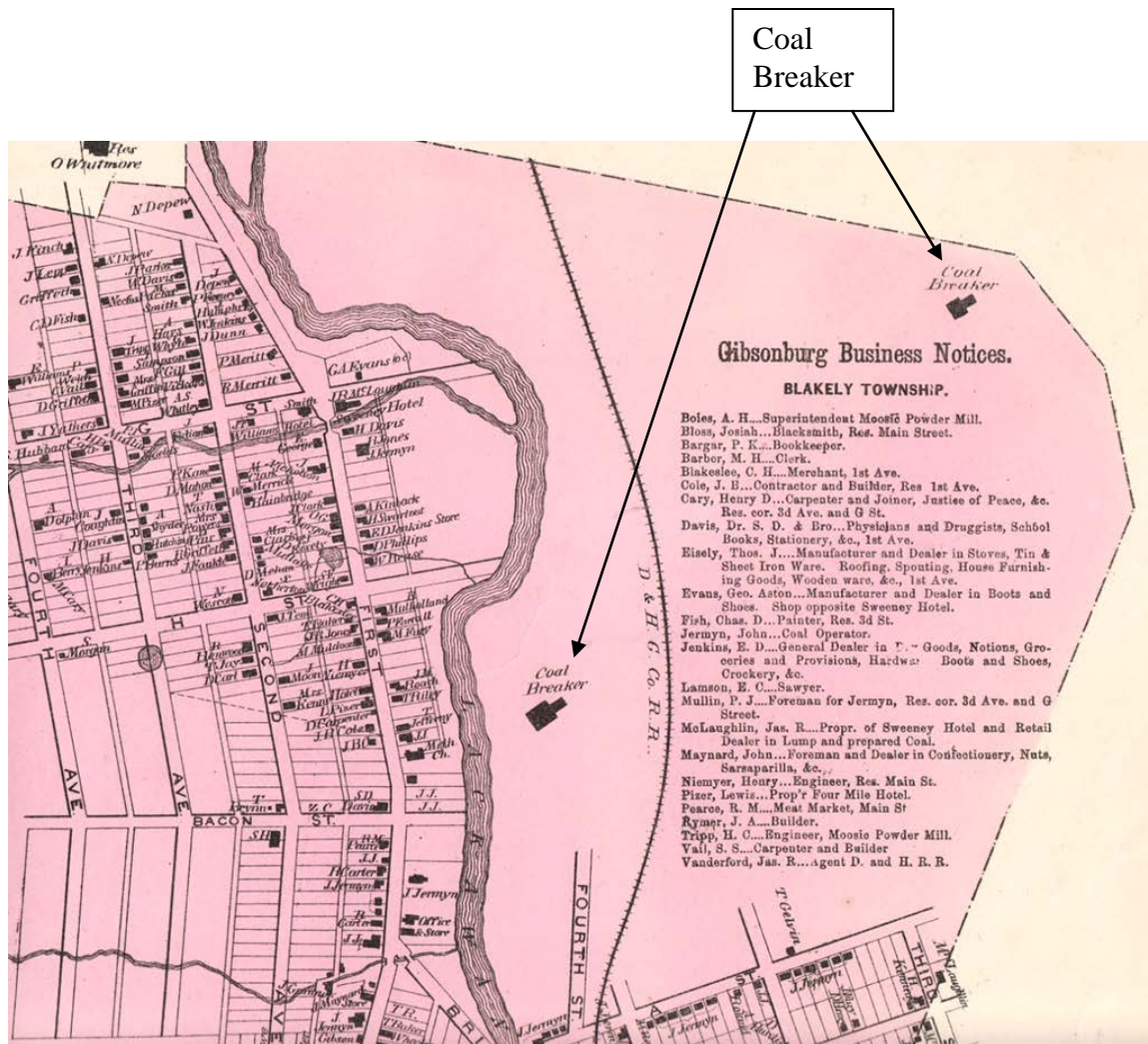
"The Frisbie Coal Co., are erecting [in Simpson] a large buckwheat and pea coal breaker. They intend to screen their entire culm pile." (*Carbondale Evening Leader*, August 31, 1891, p. 4)

"Frisbie and Elk Creek are the same place." Ed Hodorawis, October 2013

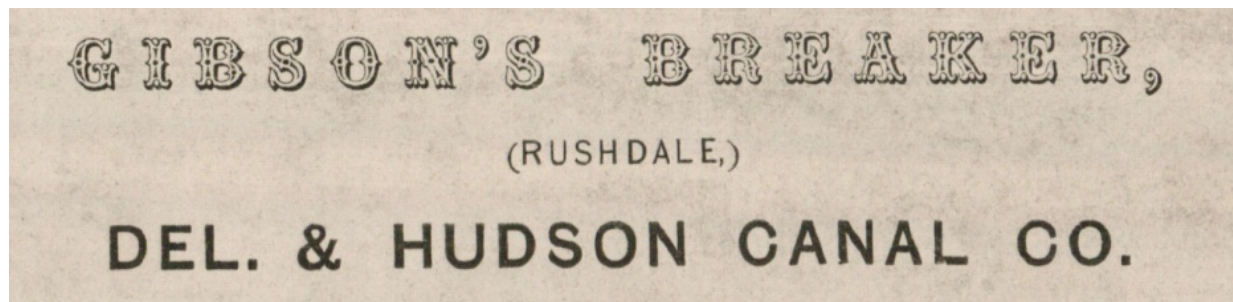
1854

Gibson Breaker

A detail of the map of Gibsonburg from the 1873 *D. G. Beers Map* volume (p.33) is given on the following page. On that map two coal breakers are shown. Is one of those breakers the Gibson Breaker?



Is one of the breakers shown on the above map the Gibson Coal Breaker, which is shown below in a photograph by Johnson (Scranton, PA, 1860) that is in the archives of the Wayne County Historical Society?





Gibson's Breaker, Rushdale

In 1869, Rushdale became the incorporated borough of Gibsonburg, with John Jermyn as its first mayor; in 1873 the community was renamed *Jermyn* in honor of John J. Jermyn.

John Jermyn's association with the Gibson estate and the Gibson breaker is described in *Clark* (p. 205) as follows:

"Mr. Jermyn having closed his engagement [c. 1865] here [Archbald] with the same success, which seems ever to attend him, with the same foresight which has all through life characterized him, sought out, and before closing his business at Archbald, effected a contract for mining the coal from the lands of the Gibson estate, situated two miles up the Lackawanna River from Archbald, at what was then known as Rushdale. Here, as at Archbald, the reputation of the community and quality of coal to be mined was such that mining operations had been abandoned entirely, and the operators [Winton & Chittenden] almost literally driven from the fields, the mines having stood idle for several years. With all these discouragements, and contrary to the advice of his friends, who could see nothing but failure and disaster in the undertaking, Mr. Jermyn, after having examined the mines for himself, and satisfied his own that there was money in it, pushed steadily forward with his improvements, keeping his own counsel until he should be fully prepared to enter upon his mining operations. / Having put his machinery and buildings in

thorough repair, and added largely to his facilities for mining and preparing coal, in 1865, Mr. Jermyn entered upon the most successful undertaking of his life, and laid the foundation for a large share of property and wealth, which to-day crowns his career, having effected two new leases of coal to the amount of one million tons each, besides filling successfully the original contract of one million tons, all from the same estate, and with facilities for mining and delivering the entire two million tons of coal within the next ten or fifteen years. Mr. Jermyn stands to-day among the most successful and wealthy coal operators of the valley."

Hitchcock, too, in Volume II, p. 344, underlines the wisdom of John Jermyn in his decision to develop the mines on the Gibson estate at Rushdale:

"The coming of John Jermyn [to Jermyn], who secured a contract from the Gibson estate for the reopening and working of their mines at Rushdale (Jermyn), which had been abandoned and deemed of such a character that they were supposedly worthless, began a new era [in Jermyn's history]. Although strongly advised against investing, Mr. Jermyn persisted, and the result justified his judgment, Jermyn as a municipality and Jermyn, the man, benefitting largely by the successful operation of the mines. Extensive collieries are operated in the borough, as well as several successful manufacturing plants. . . . When the Delaware & Hudson Canal Company became possessed of the lands of the Gibson estate in 1874, they changed the name of the station to Jermyn, in honor of John Jermyn, who there laid the foundation of the fortune he afterward accumulated, now known as the 'Jermyn Estate.' "

John Jermyn's involvement in the community of Rushdale, we learn from *Clark* (p. 205) had wholly positive consequences:

"So far from the predictions made when he was about to enter on this his last enterprise proving true, just the reverse has been the result. Thoroughly sifting the community when he came here, none but the better portion was retained and the refuse driven out [emphasis added]. Upright, honest and industrious men were encouraged to come in, and with a liberality which has always been a characteristic of Mr. Jermyn, the helping hand was extended, and the encouraging word spoken to those who wished to obtain a house for their families, until from a little cluster of shanties found here when Mr. Jermyn took possession, in which the occupants had no interest, may be found a large and flourishing town of five thousand inhabitants, with large and well-filled churches, a graded school, second to none in the county, together with hotels and places of business, such as would grace a city."

From Walter Avery's article, titled "No Jermyn without John J." (*Carbondale News*, September 28, 2011, p. 17), we learn that John Jermyn "built Breaker #1 in 1860, producing 600 tons of coal a day, with 300 men and boys employed in the breaker. When he built Breaker #2 in 1867, it produced 800 tons a day. Near the breaker, on what is now Chestnut St., he built a four-story mill, which turned out 100 barrels of Valley Star Flour and 20 tons of feed a day. / On the west

side of the Lackawanna at the corner of what is now Bridge St. and Washington Ave. was the Jermyn Company Store. . ./ John J. [Jermyn] sold his mine to the D&H Coal Co. and moved to Scranton in 1882.”

Here is the photograph of John J. Jermyn by S. S. Hull that is given facing page 204 in *Clark*:



Here is the likeness of John Jermyn that is given facing page 468A in 1880:



Here is the biographical portrait of John Jermyn that is given in 1880 (pp. 468A-B):

“JOHN JERMYN was born in Suffolk, England, in 1827. In the spring of 1847, he sailed for America. Two days after his arrival in New York City, he was in the Lackawanna Valley, with no immediate prospect of employment or business. He got a job working for Scrantons and Platt, at the old furnace unloading coal. He next sought and secured the contract for opening the Diamond coal mines at Scranton, and was the first man to put a shovel into that important work.

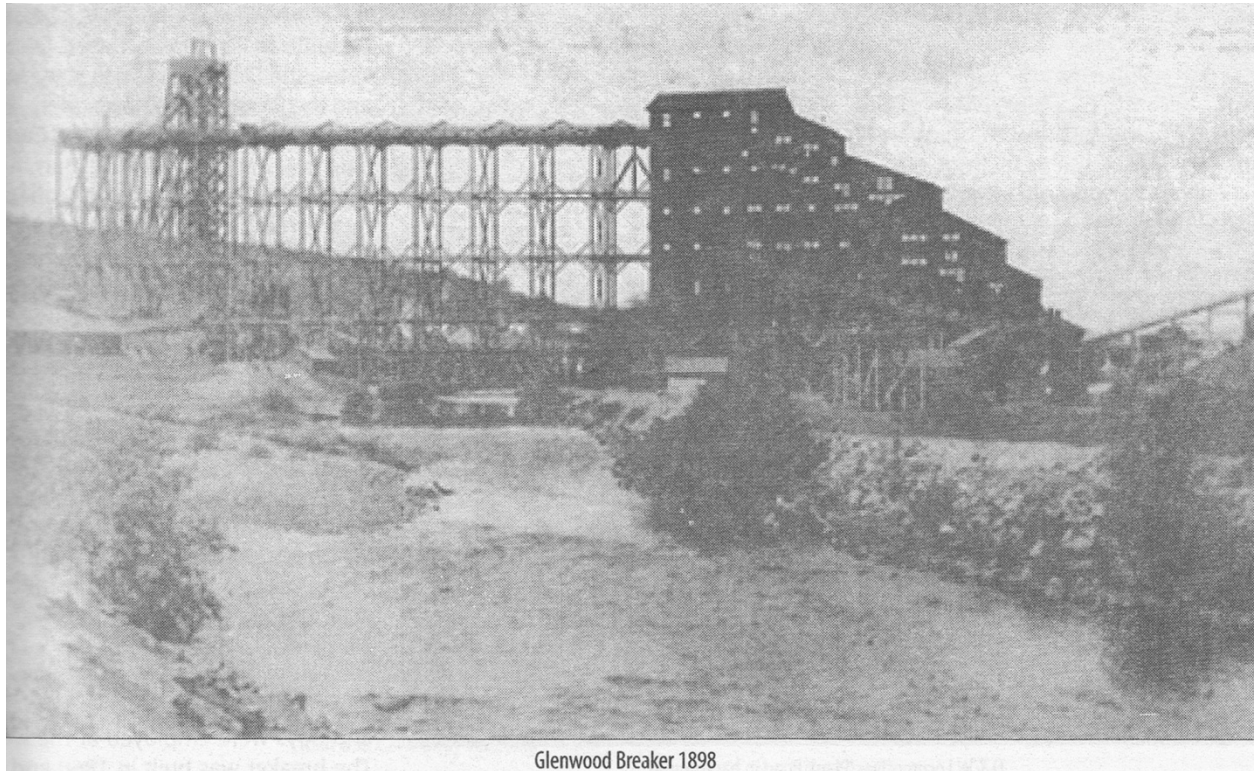
This work he did from 1851 to 1854. He then entered into a contract to open and develop the coal of the New York and Pennsylvania Coal Company, situated in the notch of the mountain above Providence and known as the Rockwell mines. This he did for four or five years. In 1859, he entered into a contract with Judson Clark, Esq., for the sinking of a slope and mining the coal from the lands of the said Clark, situated on the Abington turnpike and near the mines of the New York and Pennsylvania Coal Company. He did this for two years. Judson Clark died. Then, with a Mr. Clark from Carbondale and a Mr. Wells, he became the proprietor of the mines under a lease with the estate, under the firm name of Jermyn, Wells & Co. This he did for three years. Before this lease expired with the Judson Clark estate, he entered into an agreement with Judge Birdseye of New York City for the working of his mines at Archbald. He did so with great success and three years later the owner of those mines sold them to the Boston and Lackawanna Coal Company at a great profit. Next, John Jermyn entered into a contract, in 1875, with the Gibson estate for the mining of their lands two miles up the Lackawanna River, at Rushdale. This he did with great success. When the borough of Gibsonburg was incorporated in 1869, it was thought fitting that it should bear the name of the estate on which it was founded, hence the name Gibsonburg. In 1873, the name of the borough was changed to Jermyn. In 1851, John Jermyn married Susan Knight (daughter of Joseph Knight of West Scranton, born 1824; married October 19, 1851) of Cornwall, England, and they were the parents of ten children (Joseph, Willie, Frank, Myron, George, Walter, Edward, Emma, Susan, and John)."

On May 29, 1902, John J. Jermyn died in Scranton.

1855

Glenwood Breaker

Shown below is the photograph of the Glenwood Breaker, in 1898, that is given on page 3 of *125th Anniversary of Mayfield 1881-2006*.



Glenwood Breaker 1898

About the Glenwood Shafts of the Hillside Coal and Iron Company, we read the following in the 1886 *Reports of the Inspectors of Mines*:

*“Hillside Coal and Iron Company—Glenwood Shafts.—*The work on the two shafts and breaker, reported in last year’s report, 1887, under the head of Erie colliery improvements, has been advanced as follows: The shaft to top vein has been completed at a depth of 100 feet. The shaft to bottom vein has reached a depth of 160 feet. Work is being pushed rapidly forward in this shaft. The breaker to prepare the out-put of these two shafts for market is about finished, and is expected to prepare coal from the top vein about February 1, 1888. This company is also sinking the Clifford shaft, at Forest City, as rapidly as possible.”

Published in the *Carbondale Leader*, November 30, 1872, p. 3, is a notice about the failure of the Glenwood Coal Company in November 1872. The relationship, if any, between the Glenwood Breaker and the Glenwood Coal Company has not yet been learned. Here is that notice about the bankruptcy of the Glenwood Coal Company in 1872:

"FAILURE. / The Glenwood Coal Co. has been adjudged bankrupt, and claims as follows were presented at a meeting of the creditors: Erie Company, \$56,518.45; Jay Gould, \$110,880.88; Filer, Marsh & Co., \$90,574.84; Wilard, Martin & Bach, \$25,529.39; Wilard, Martin, & Co., \$27,524.50; H. B. Palmer, \$12, 285; Narragansett Steamship Co., \$5,000; Monies & Pugh, \$5,000; and Edward Jones, \$5,317. Gen. E. Phinney was elected assignee, and an order will be issued by the court directing a sale of the property. / The Glenwood Coal Co. was organized in 1870, with George Hall, of New York, as President, and Jay Gould and James Fisk, Jr., members of the board of directors. My Jay Gould had purchased the Whitmore property, located near the city, and with these valuable coal lands, and leases which were purchased of Filer, Marsh & Co., consisting of what is known as Carbon Hill, Oak Hill, and Spring Brook collieries. The company commenced operations on rather an extensive scale, shafts were sunk, breakers built, railroad connections constructed, and large sums of money expended on improvement, but it has all gone in the vicinity of the woodbine, now to be gobbled up by some of the big corporations." (*Carbondale Leader*, November 30, 1872, p. 3)

The Glenwood Colliery was abandoned May 3, 1909, and was torn down, with the exception of the North wing, which will be used for a washery. The coal from the Glenwood mine was transported underground to the Erie shaft and hoisted to the Erie breaker, where it was prepared for market.

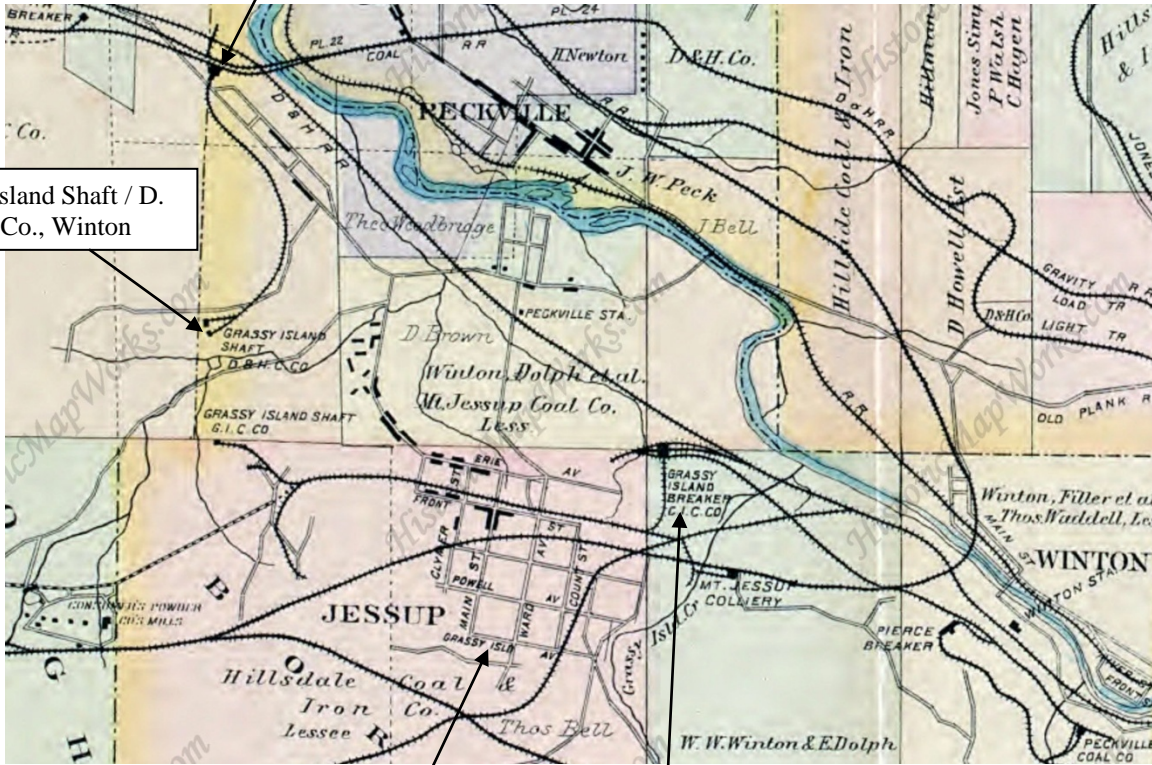
1856

Grassy Island Breaker

There were two Grassy Island Breakers, one in Winton/Jessup, which was operated by the Grassy Island Coal Company, and one in Peckville, which was operated by the Delaware and Hudson Canal Company. Both of these Grassy Island Breakers are shown on the detail from Plate 11 of the 1894 *Baist Map* given below.

Grassy Island Breaker, Peckville: at the juncture of the rail line from the Grassy Island Shaft and the loaded track on the D. & H. Gravity Railroad.

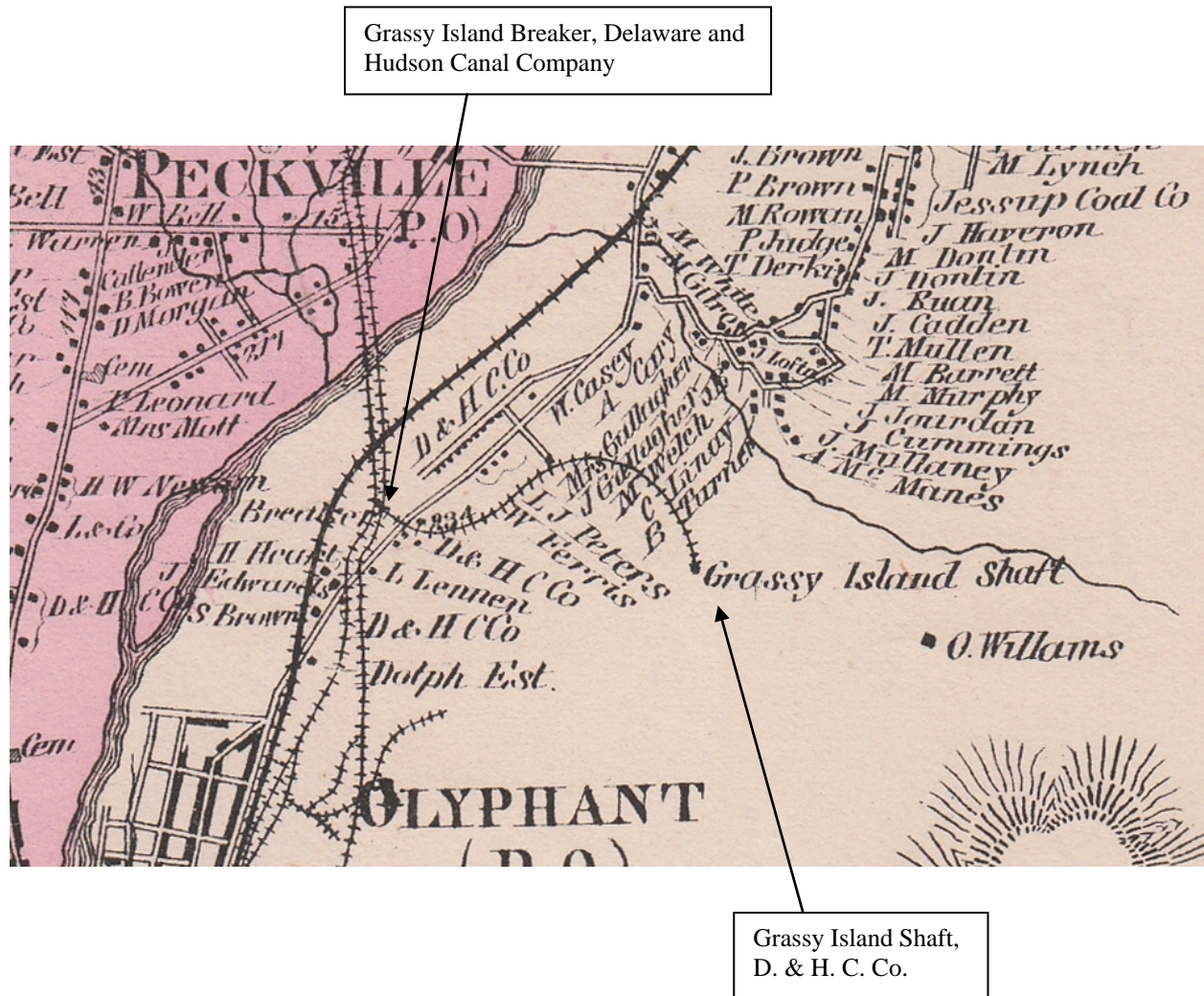
Grassy Island Shaft / D.
& H. C. Co., Winton



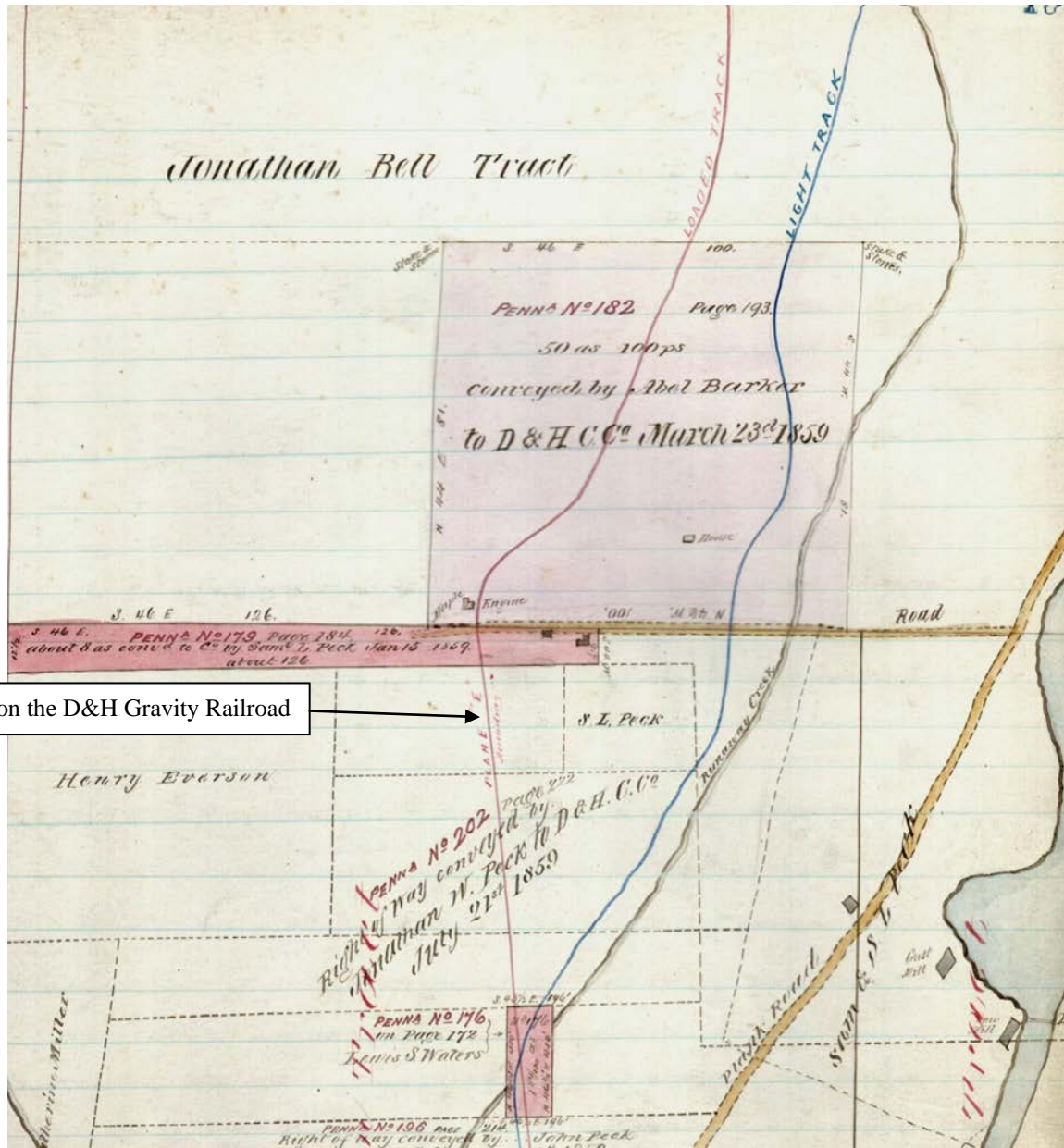
Grassy Island
Avenue, Jessup

“Grassy Island Breaker / G. I. C. Co.” in Winton/Jessup: operated by the Grassy Island Coal Company. Tracks from this breaker connected with the D&H steam line/Valley Road; also to the New York, Susquehanna & Western Railroad.

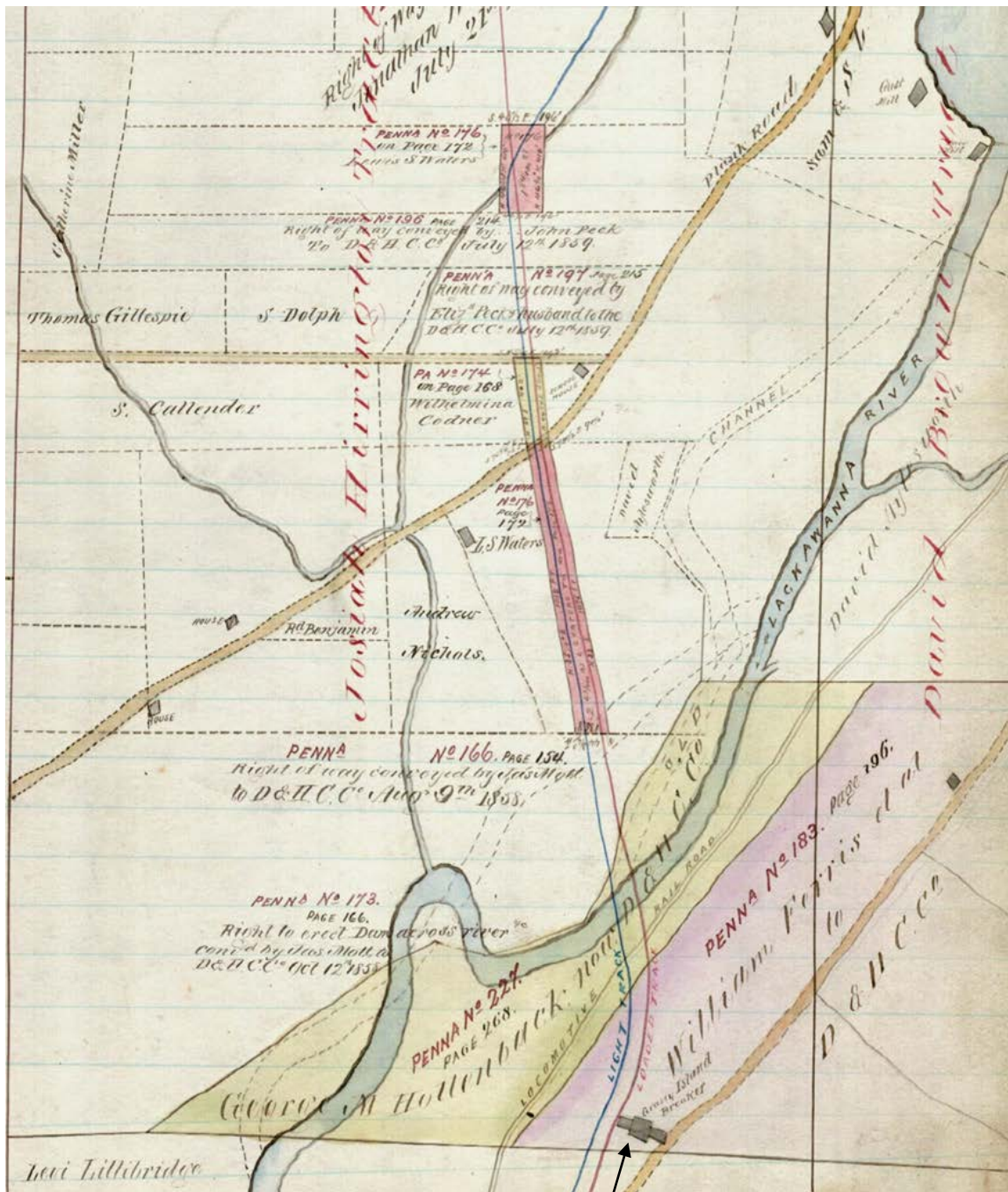
On the 1873 *D. G. Beers* map detail of Peckville/Olyphant shown below, the Grassy Island Shaft and the rail line by which it was connected to the Grassy Island Breaker and the D&H loaded track are shown.



In the *D. & H. Deed Book – Luzerne*, on p. 195, there is a map that illustrates the deed, pp. 196-98, dated March 24, 1859, between William Ferris and wife and The Delaware & Hudson Canal Company. On that map, Plane E and the Grassy Island Breaker are shown. Here is the top half of that map:



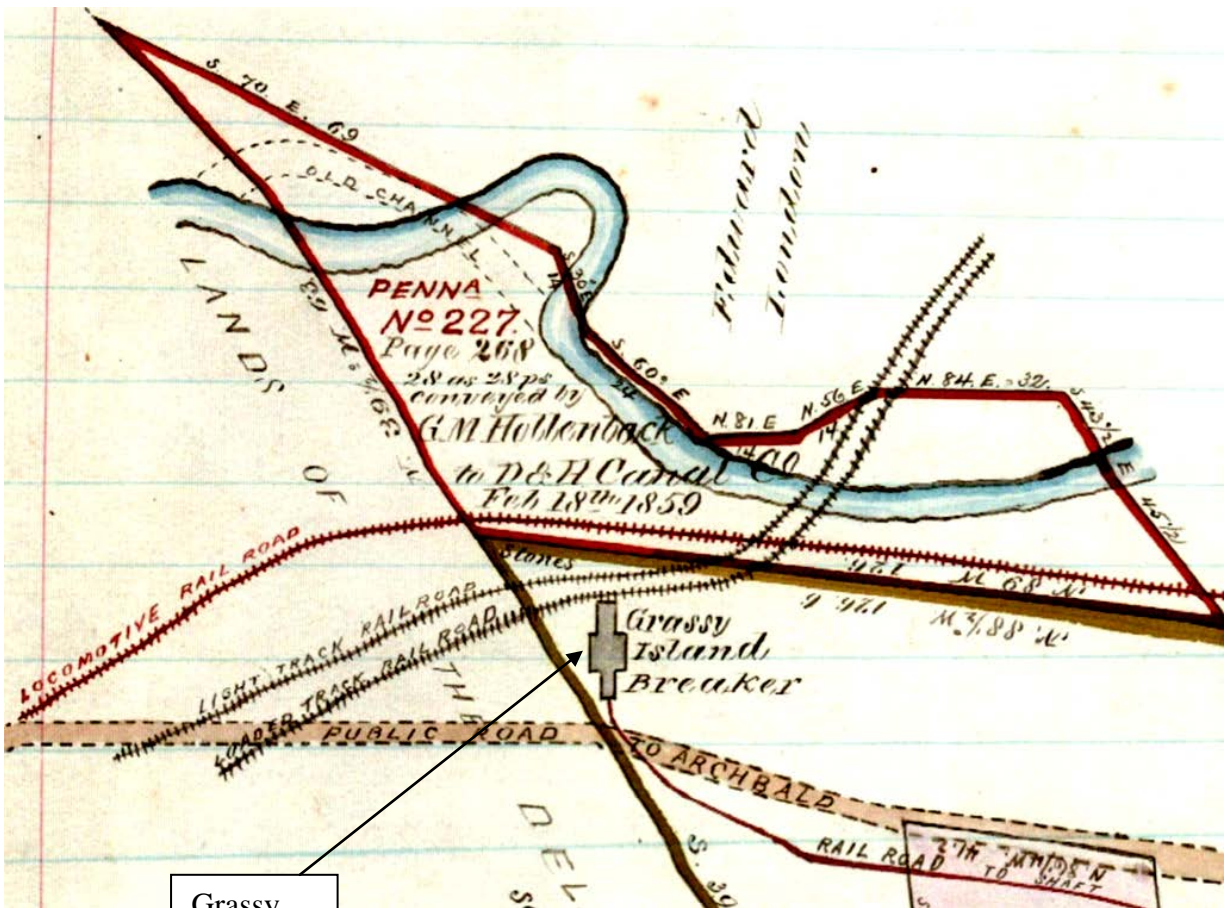
Here is the bottom half of the map, on which the Grassy Island Breaker is shown:



Grassy Island Breaker

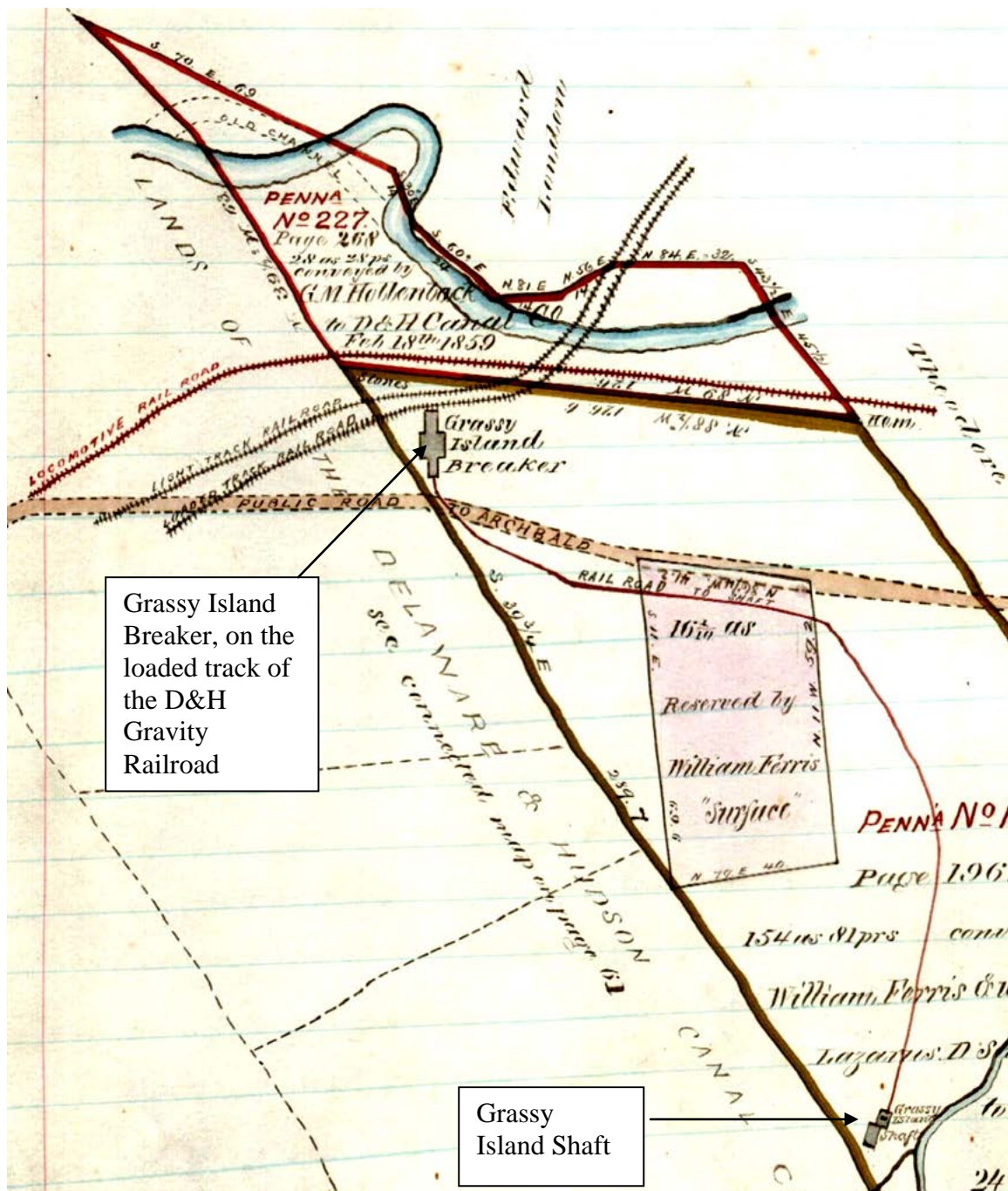
The exact location of the Grassy Island Breaker and Shaft are shown on the map on page 270, dated February 15, 1862, that illustrates the deed, pp. 268-270, in *D&H Deeds Luzerne 2*, between George M. Hollenback and The Delaware and Hudson Canal Company. Here are two details from that map, on the first we see the Grassy Island Breaker, on the second we see both the Grassy Island Breaker and the Grassy Island Shaft:

Grassy Island Breaker:

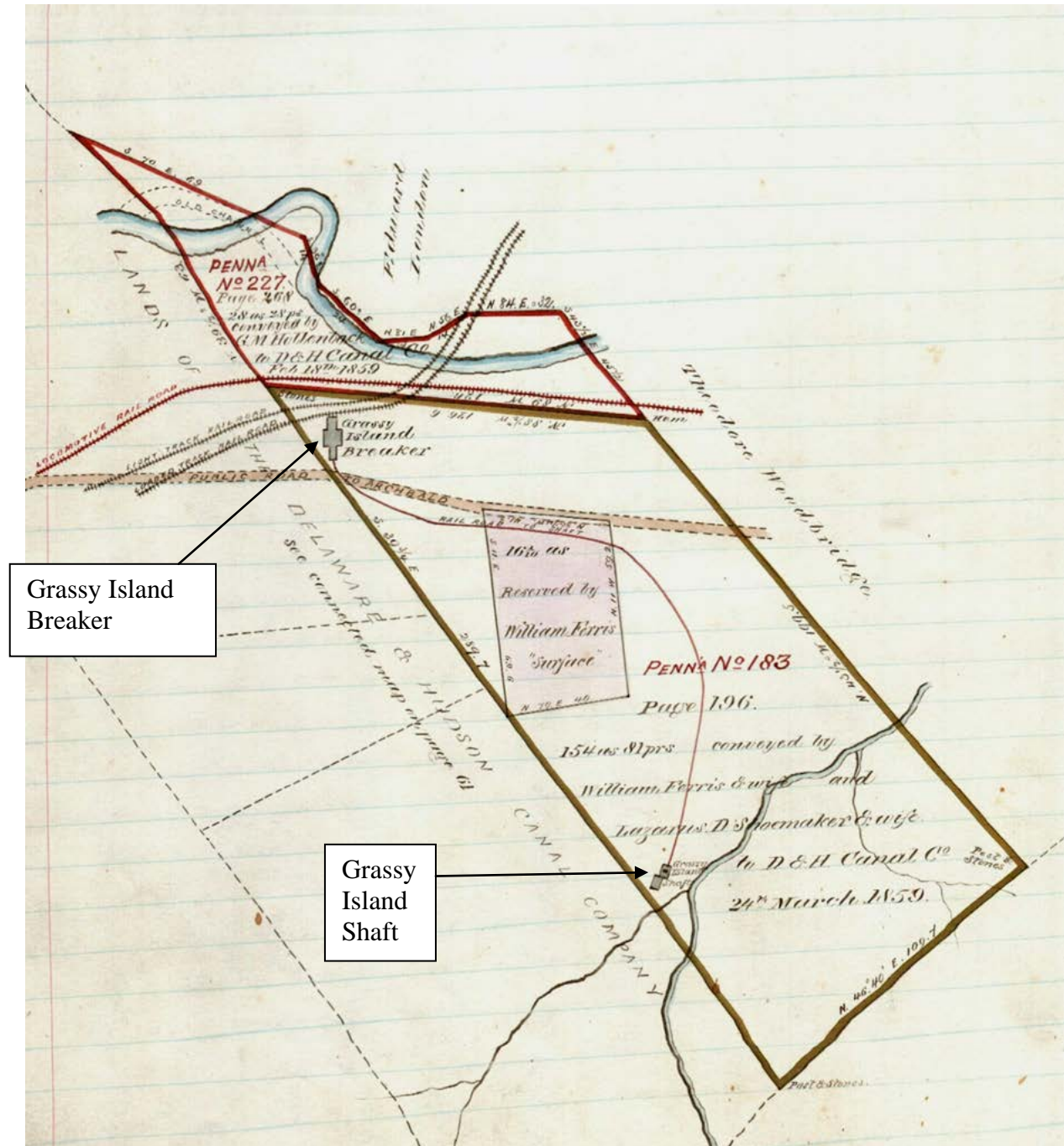


Grassy
Island
Breaker

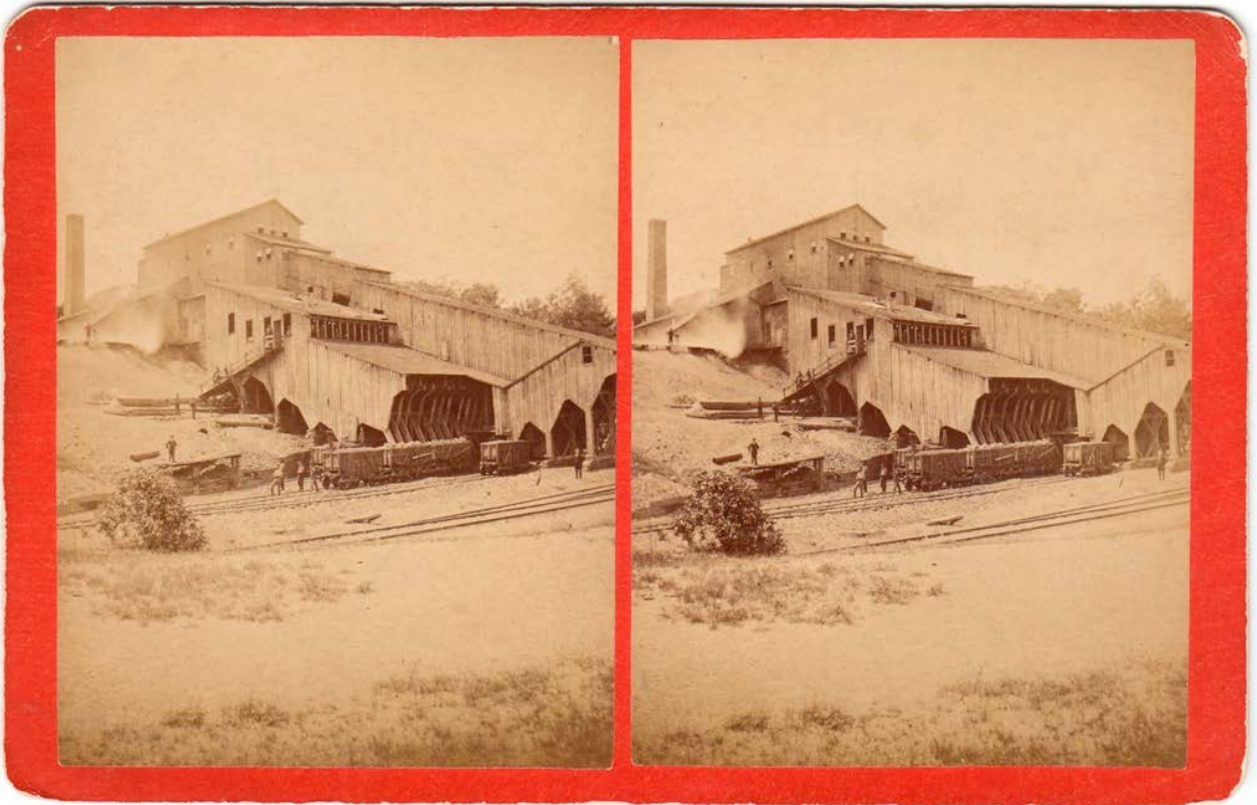
Grassy Island Breaker, Grassy Island Shaft:



In the *D. & H. Deed Book – Luzerne 2*, there is a map on page 270 that illustrates a deed, pp. 268-70, between G. M. Hollenback and wife and The Delaware & Hudson Canal Company. On that map, both the Grassy Island Breaker and the Grassy Island Shaft are shown. Here is that map:

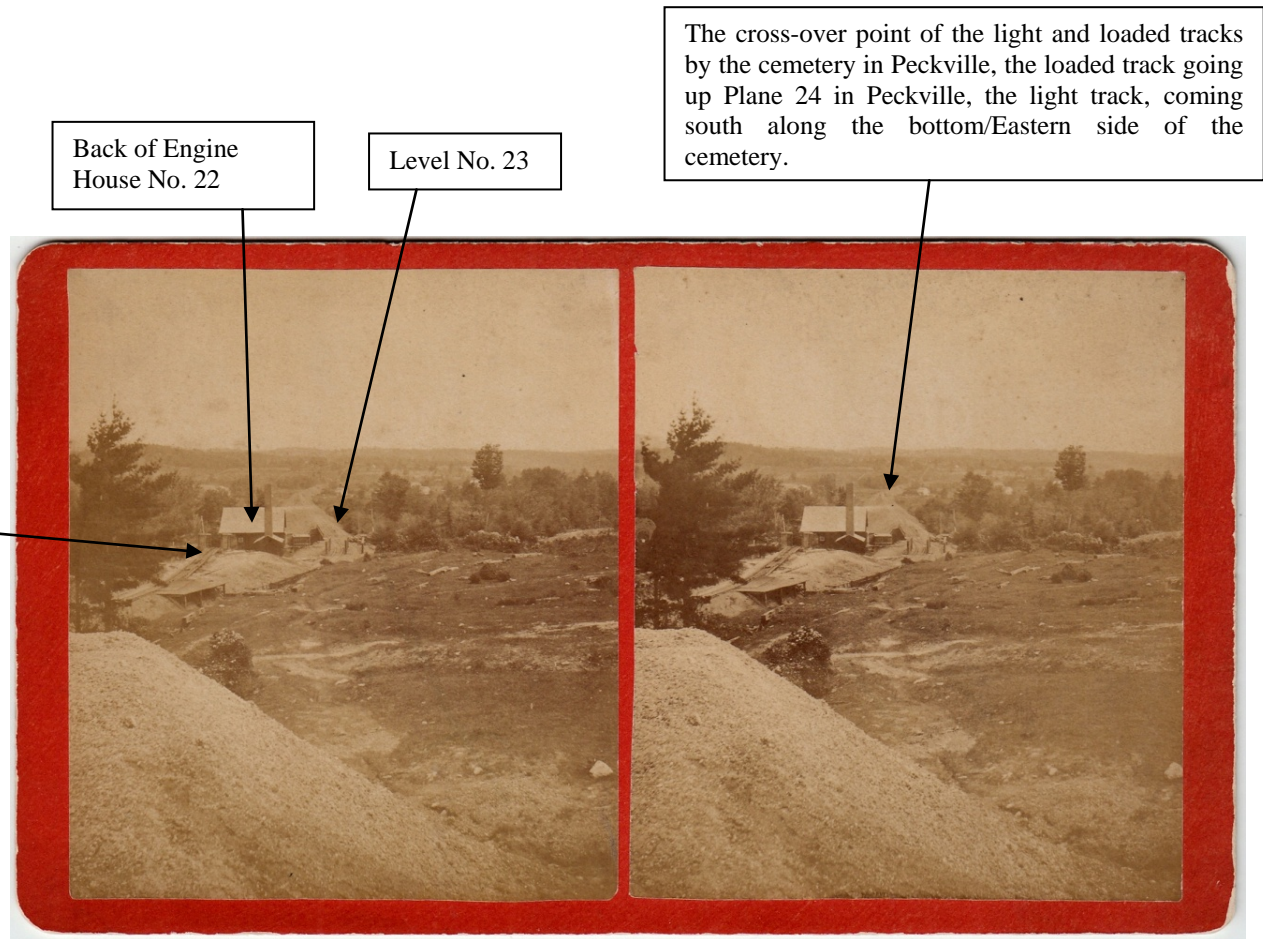


Here is Hensel stereograph card No. 1129: *Grassy Island Breaker, near Peckville*. Stereocard in the archives of the Carbondale Historical Society.



In Hensel's view No. 1129, the tracks in the foreground, descending to the left, are part of Level 23 (between the head of Plane No. 23 and the foot of Plane No. 24).

Here is Hensel stereograph card No. 1130: *View over the Gravity Road from Grassy Island Breaker* [Peckville].



What are we looking at in this Hensel view “*over the Gravity Road*” from Grassy Island Breaker?

We are looking West, at the back of Engine House 22, in the direction of Peckville. The line of the mountain in the background reads correctly as the western mountain line in this section of the Lackawanna Valley. This view was taken by Hensel in 1879, which means that both the new (after 1873) loaded track bridge and the existing (in 1873) bridge across the Lackawanna (over which both the loaded and light tracks passed until the construction of the new loaded track bridge, after 1873) were in existence when this photograph was taken. To the left of the Engine House, we see a track coming toward us, the viewer. That is the light track heading South to Valley Junction. The knuckle at the head of the plane is visible to the left of the Engine House—the beginning of the level to Valley Junction starts there. Straight into the photograph, can be see

the cross-over point of the light and loaded tracks by the cemetery in Peckville, the loaded track going up Plane 24 in Peckville, the light track, coming south along the bottom/Eastern side of the cemetery.

Given below is the photograph of the Grassy Island Shaft that was taken by Thomas H. Johnson (Scranton, PA) in 1860. The copy show here is from an original albumen photographic print on a letterpress mount of this photograph in the collection of the Wayne County Historical Society.

GRASSY ISLAND SHAFT,
DEL. & HUDSON CANAL CO.



Grassy Island Shaft, Delaware & Hudson Canal Company

The Grassy Island Shaft, shown above, was five-eighths of a mile from the Grassy Island Breaker.

History of Grassy Island Shaft and Breaker:

In *1880* (p. 470), we read the following about the D&H Grassy Island shaft and breaker:

"Grassy Island shaft was sunk by the Delaware and Hudson Canal Company in 1864, and the breaker completed in the spring of 1865. The shaft is three hundred feet deep, the working slope some fifty feet deeper and extending three-fourths of a mile through the Hull, Mott, Barker, Hallsted, B. T. Reed and Delaware and Hudson tracts. Joseph Atherton was the first outside foreman succeeded by William Bell, and in 1872 by J. G. Bell, the present manager. The first mine foreman was James Nicol, followed by Joseph Davis, and in 1874 by Andrew Patton, who has the position to this time. Two pairs of hoist engines of thirty horse power each and one breaker engine of the same power are in use. A self-acting inclined plane facilitates the transfer of cars. Two hundred and sixty-nine men and boys are employed in the workings, and one hundred and five men and boys and one locomotive about the breaker. The daily capacity and production is 750 tons, having recently been increased from 650. The shaft is five-eighths of a mile from the breaker. The number of tenant houses is nineteen."

In *Century of Progress* (p. 189) we read the following about the Grassy Island branch of the D&H:

"During 1865 there was some construction of industrial tracks for the purpose of reaching mines in the valley, the Grassy Island branch being completed and some work done on the Leggitts Creek branch which was completed in the following year."

Operations were discontinued at Grassy Island, Olyphant Colliery on April 28, 1954

Here is the Delaware and Hudson Canal Company section (p. 165) of Table No. 7 of the *1877 Mine Inspectors Reports*, in which precise data are reported on the collieries owned and operated by the D&H at that time.

Delaware and Hudson Canal Company

NAME OF COLLIERY.	SHAFTS.					SURFACE SLOPES.				UNDERGROUND SLOPES.				Total depth of mines in feet.	ELEVATION.		TOTAL OPEN'GS.			
	Number of.	Length in feet.	Width in feet.	Depth in feet.	Elevation of head ab. tide-water, in feet.	Number of.	Length in feet.	Vertical depth in feet.	Elevation of head ab. tide-water, in feet.	Number of.	Length in feet.	Vertical depth in feet.	Elevation of head ab. tide-water, in feet.		Of bottom above tide-water, in feet.	Of bottom below tide-water, in feet.	Shafts.	Slopes.	Drifts and tunnels.	Number of coal breakers.
Von Storch slope,	2	30	10	540	1,177	1	225			1	350			540	560		2	1		1
Leggett's Creek shaft,	2	24	10	340	789					1	300	15	449	355	434		2			1
Marvine shaft,	1	44	10	330	742									330	412		1			1
Eddy Creek shaft,	2	27	10	408	782					1	450			408	377		2			1
No. 1 and No. 2 colliery, Olyphant,*	2	23	10	386	785														2	1
Grassy Island shaft,	2	14	10	170	879					2	500	16	633	291	617		2			1
White Oak colliery,	2	10	10	275	908					1	300									
Powderly colliery,*		7	7	90	1,022						1,050			90	1,022		2		1	1
No. 1 shaft and W. B. tunnel,	1	11	11	89	998	1	450	65	998					80	900		1	1	1	1
No. 3 shaft,	2	24	9	70	1,022									70	952		2			1
Coal Brook colliery,	3	10	10	30	1,073															
		8	8	25																
		10	7	50	1,200						275									
		8	8	40						2	400			50	1,150		3		5	1
Totals,	17					2				8							17	2	9	10

In 1866, J. L. Atherton was promoted to be superintendent of the Grassy Island mines at Olyphant, which he opened and operated for two or three years. This we know from the portrait of the man that is given in *PABRLC*, pp. 787-88, wherein we read:

"Mr. Atherton was born in 1836, in what is now Wyoming, Luzerne County, Pa. . . He became a member of Company B, Twenty-eighth Regiment Pennsylvania Volunteer Militia, and on the second emergency call served from June 16 to July 27, 1863. / The same year Mr. Atherton sold out his [carriage] business at Montrose on account of the war, and in November, 1864, came to Scranton to enter the service of the Delaware & Hudson Canal Company, by which he has since been employed. For some time he served as general coal inspector; in 1866 was promoted to be superintendent of the Grassy Island mines at Olyphant, which he opened and operated for two or three years; was then made superintendent in charge of the Olyphant and Grassy Island mines; in 1872 became superintendent of the Leggetts Creek mines, which position he held until made superintendent of the Marvine mines. In 1882 he took charge of the Manville mines under the Delaware, Lackawanna & Western Companies, and there remained until 1892, when he was given the position of assistant outside superintendent of the Delaware & Hudson Canal Company, serving under A. H. Vandling, superintendent, until January 1, 1897, when upon the resignation of that gentleman, C. C. Rose was appointed. He is prompt and reliable in the discharge of every duty, and enjoys the confidence and esteem of the company, as well as the respect of those under him."

In mid-November 1872, Brian Fallon, fireman at the Grassy Island shaft, had the impression that he was stepping onto the platform that is used to carry coal and miners up the mine shaft, but the platform was not there, having been lowered to the bottom of the shaft after Fallon exited the shaft. Fallon, therefore, stepped into the void, and fell 150 down the shaft. By accident, he caught hold of the chain that suspends the platform, and saved his own life. Here is the report on this accident that was published in the *Carbondale Leader* of November 16, 1872:

“A PERILOUS FALL.—Grassy Island Shaft, a mile above Olyphant, on Eddy Creek, brought out the true character of a hero a few days since. This shaft is one the deepest in the valley. Brian Fallon, the fireman had occasion to go down the shaft part way upon a platform used for bringing up coal, and carrying the miners up and down to their work. After descending to the desired vein, he stepped from the platform for a few minutes to attend to some duty in one of the chambers. Returning with a can of oil in his hand, and a dim miner’s lamp in his cap, he walked forward to the shaft to go up, expecting that the platform still remained where he left it, instead of being lowered to the bottom, some 300 feet below. He walked on to step on the platform as he supposed, and to his horror he started down the dark abyss. As he began to fall he turned a perfect somersault and struck the long chain suspending the platform 300 feet below. By mere accident he caught this as lightning, as he was falling with all the rapidity his weight could give him. He clung to this for his life, and tore the flesh from his fingers before he could arrest his descent, 150 feet from the bottom. Smarting with pain, yet clinging to the huge chain for deliverance, he called the attention of the engineer to his perilous condition by a loud whistle, and was drawn up on the chain to safety.—*Republican.*” (*Carbondale Leader*, November 16, 1872, p. 3)

On September 4, 1879, at the Grassy Island shaft, Patrick Docherty, a miner, was fatally injured by a fall of top coal. Docherty was warned by John Flemming and Michal Langan, his laborers, that the coal where he stood was dangerous. He ignored their warning, and barred down coal upon himself, with the result already stated. In the 1879 *Reports of the Inspectors of Mines*, 1879: p. 195, we read:

“Patrick Docherty, a miner at the Grassy Island shaft, Delaware and Hudson Canal Company, Olyphant borough, was fatally injured September 4, by a fall of top coal. None of his bones were fractured, but he was injured internally, and died on the 7th. He had just fired a blast in the top coal, and had gone into the face to bar down some loose coal left by the blast. John Flemming and Michael Langan, the laborers, judging that the coal was dangerous where he stood, warned him of the fact, and advised him to get a ‘horse’ and bar the coal down from the outer edge; but instead of heeding this warning, he went on in his own way and barred the coal down upon himself, with the result already stated. The chamber was perfectly safe, and no accident need ever occur in it if ordinary care were exercised in working it. But the majority of accidents occur in just such a safe place as this was. / Docherty was of Irish nationality, forty-five years of age, and left a widow, with three children, to mourn his loss.”

In the 1879 *Report of the Inspectors of Mines* (p. 216), we also learn about the tragic death of John David Humphreys, who drove and ran cars from the foot of an inside plane to the branch at the foot of the Grassy Island shaft. The mule that he was working with kicked him in the pit of the stomach, which resulted in his death. Here is the report on the death of Humphreys from the 1879 *Report of the Inspector of Mines*:

“John David Humphreys, a driver at the Grassy Island shaft, Delaware and Hudson Canal Company, Olyphant borough, was almost instantly killed, November 25, by being kicked by a mule. This boy was driving and running cars from the foot of an inside plane to the branch at the foot of the shaft. He had run down his trip, and was following it on a run along side of the mule until he came down on the main or south heading road where, as the mule was going too fast for him, he was obliged to let go of her bridle and let her pass him, and just as she was passing him she kicked him in the pit of the stomach, killing him as already stated. The mule had the name of being a very quiet one up to this time; but she had lost her good name when I visited the colliery a few days after, and she indulged in her propensity for kicking twice that day. An inquest was held by Coroner Traverse, (of which I was not notified,) and a verdict rendered of ‘death by accident.’ ”

The inside foreman of the Grassy Island Colliery in 1880 was Andrew Patten. In 1880 (p. 470B), we read:

"Andrew Patten, mine foreman, was born in Northumberland county, England, and came to America in 1837, settling at Mine Hill Gap, Schuylkill county, where for thirteen years he was mine superintendent for Charles M. Hill. In 1850 he removed to Plymouth, where with several others he opened a colliery. Six years later he sold his interest to his partners, and after superintending the Spring Brook colliery for four years came to Blakely, where he had charge of works for Chittenden & Richmond. In 1864 he entered the employ of the Delaware and Hudson Canal Company at Olyphant, where he is now engaged as inside foreman of Grassy Island colliery. He married a Miss Percy, of England, and has eight children."

Joseph G. Bell, William Bell, and Thomas J. Waddel all worked at the Grassy Island colliery. Brief biographical portraits of these three men are presented in 1880:

"JOSEPH G. BELL, mine foreman, born in Carbondale, commenced mining in 1865 at Grassy Island colliery, having previously served through the late war as orderly sergeant of Company H 52nd Pennsylvania volunteers, and participated in the battles of Williamsport and Fair Oaks, the seven days' fight and the sieges of Forts Wagner and Johnson. He has been outside foreman of Grassy Island since 1872 and member of the coal and iron police. He married Eveline Silsbee, of Peckville, where he now resides, and has one son." (p. 470B)

"**WILLIAM BELL**, mine foreman, was born in Carbondale and commenced mining in 1867, being engaged as outside foreman at Grassy Island for four years and since 1871 at Eddy Brook No. 2. He married Kate Cool, of Pittston, and has six children. . . " (p. 470B)

"**THOMAS T. WADDEL**, born in Inverary, Scotland, came to America in 1854, settling in Pittston. He came to Olyphant in 1862 and married Ann Pettigrew. He was engaged in mining in Scotland, and has worked in the mines and at carpenter work since he came to Olyphant. He has six children and has lost four. He is a miner at Grassy Island." (p. 470D)

John Flynn, a miner at the Grassy Island Colliery at Olyphant, was hurt on July 11, 1881, when a piece of coal struck him on the left arm. Here is the accident report from the *Scranton Republican* of July 13, 1881:

"John Flynn, a miner in the Grassy Island Colliery at Olyphant, Delaware and Hudson Coal Company, was hurt Monday, by a piece of coal hitting him on the left arm, between the wrist and the elbow, breaking one of the bones." (*Scranton Republican*, July 13, 1881; reported by Bob McDonough, *Murphy*, p. 18)

James Curran, a driver boy at the Grassy Island Colliery, was struck by a huge piece coal that fell 400 feet down the shaft and struck him on the head as he was riding up the shaft from the mine. Here is the account of the tragic death of this 15-year old boy that was published in the *Carbondale Advance* of January 14, 1882:

"**Shocking Death at Olyphant.** / On Tuesday afternoon of this week, James Curran, a driver boy at Grassy Island Colliery, met with a terrible death. He, with several comrades, was coming up the shaft from the mines, when a huge piece of coal struck him on the head killing him instantly. The coal had descended before it struck him almost four hundred feet, and of course acquired a fearful velocity. Deceased was about fifteen years of age, and was a bright and promising boy." (*Carbondale Advance*, January 14, 1882, p. 3)

One of Walton Bross' hands got squeezed between the cars at the Grassy Island Breaker, and two of his fingers had to be amputated. He is now laid up. That we learn from the following notice that was published in the *Carbondale Leader* of April 20, 1883:

"Walton Bross is laid up with a seriously crippled hand, the result of being squeezed between the cars at Grassy Island Coal Co's breaker. Two fingers have been amputated." (*Carbondale Leader*, April 20, 1883, p. 3)

In January 1886, electric lights were installed in the area in the Grassy Island colliery at Peckville where the breaker boys worked. That made it possible for the boys to pick slate early in the morning and late at night. In the *Carbondale Leader* of January 1, 1886, we read:

“Electric Light at a Breaker. / The owners of the Grassy Island colliery at Peckville have had an electric light placed in their breaker to enable the boys to pick slate early in the morning and late at night. The light gives excellent satisfaction, and it is likely that this system will soon come into general use.—*Republican*” (*Carbondale Leader*, January 1, 1886, p. 4)

From an article from the New York *Coal Trade Journal* that was reprinted in the *Carbondale Leader*, August 24, 1886, p. 4, we learn that Simpson & Watkins “attend to the local interests of the Grassy Island Colliery:

“Simpson & Watkins attend to the local interests of the Grasse Island, Edgerton and North-West collieries. The first of these is located at Peckville, some eight miles north of Scranton on the Delaware and Hudson Railroad; it has an output of 800 tons of anthracite per day. The vein is twelve feet in thickness, and 400 men are employed.”

On January 29, 1889, Francis Shanley assaulted David R. Davis, the agent of the D. & H. at Olyphant, and threatened to shoot him. Davis procured a warrant for the arrest of Shanley. When the constable, accompanied by Davis, attempted to serve the warrant on Shanley, the latter sent a ball through the hat of J. Shea, and after that fired wildly, emptying his revolver. He then escaped and has not yet been caught. This incident was reported in the *Scranton Republican* of February 2, 1889 as follows:

“On last Tuesday evening the village of Olyphant came near being the scene of bloodshed. A man by the name of Francis Shanley made an assault upon David R. Davis, the agent of the D. & H. R. R. Co. at that place, and threatened to shoot him, for which Davis procured a warrant for his arrest, and accompanied the constable who had the warrant to serve, when Shanley drew a revolver and fired, the ball grazing the wrist of Davis. He again fired and sent a ball through the hat of J. Shea and after that fired wildly, emptying his revolver. He then made his escape and up to this time has succeeded in eluding the officers.” (*Scranton Republican*, February 2, 1889; reported by Bob McDonough, *Murphy*, p. 19)

James Vessey, a well known coal man who intended shortly to prospect for coal between Carbondale and Jermyn, was struck, as he was crossing the Gravity Railroad track near the Grassy Island breaker, by a train of cars which were slowly running out of the Grassy Island breaker. In the *Carbondale Leader* of January 26, 1891, we read the following about this accident:

“HIS NECK BROKEN. / A Well Known Coal Man Killed by Gravity Cars. / James Vessey, a well known coal man who intended shortly to prospect for coal between Carbondale and Jermyn, and who was recently with the Ontario Railway, met a terrible death on the gravity Saturday evening. While crossing the track near Grassy Island breaker he was struck by a train of cars which were slowly running out from the breaker, and was twisted in such a manner as to break his neck. One of his arms was considerably cut and a few scratches were on his face. / The *Scranton Times* says: ‘Mr. Vessey leaves an invalid wife and three children, the eldest of whom is thirteen and the youngest nine years of age. He left the Ontario Company’s employ some time ago and was going into the coal business on his own account on land between Jermyn and Carbondale. A lease had been signed only a few days ago, which involved thousands of dollars and hundreds of acres of coal land, and operations were to be begun at once.’” (*Carbondale Leader*, January 26, 1891, p. 4)

On Monday, May 6, 1907, three tons of giant powder, kept in the D&H powder house on Lackawanna Street, near the Grassy Island Colliery, exploded, causing the worst devastation of property witnessed in the Lackawanna Valley for years. The effects of the explosion were felt in Archbald, Blakely, and Throop. Miraculously, no one was injured. Here is the account of the accident that was published in the *Scranton Republican*, May 7, 1907:

“Olyphant and Blakely were treated to a miniature earthquake early yesterday morning, when about three tons of giant powder, kept in the D & H powder house on Lackawanna Street, near the Grassy Island Colliery, exploded. By some freak of good fortune no one was injured. / The effects of the explosion were felt from this city to Archbald and windows were shattered in Blakely and Throop as well as Olyphant. / Many houses in Olyphant were almost wrecked, windows being smashed, gas and water pipes burst, plaster shaken from the walls and chimneys toppled over, creating the worst devastation of property witnessed in this valley for years. . . / On Railroad Street every house was badly damaged. Stoves were over-turned, dishes strewn in places on the floor, doors knocked out of place, the walls of the houses thrown out of plumb, outside chimneys were knocked into sections, pictures were hurled from the walls, roofs were displaced and furniture knocked in all directions. / . . . The area affected extends more than three miles. . . / . . . The side of the engine house near the scene of the explosion was carried away, and a piece of steam-pipe almost fifteen feet in length, was found after the explosion one hundred yards away. . . / . . . Most of the citizens were sleeping when the explosion occurred. . . / . . . it

was impossible for wagons to go to the Grassy Island Colliery today. Because of the explosion the colliery was shut down throwing seven hundred men and boys out of employment. . .” (*Scranton Republican*, May 7, 1907; reported by Bob McDonough, *Murphy*, pp. 50-51)

Another terrifying explosion took place on April 6, 1911, when a powder house at the new Olyphant #2 shaft of the Delaware and Hudson Company blew up. As with the 1907 explosion mentioned above, remarkably, no one was injured by this explosion. The roof of the powder house was blown off the building and several barrels of oil, which were stored in the structure, were broken open by the explosion, their contents taking fire and sending up a blaze that could be seen for miles.”About this explosion, we read the following in the *Scranton Republican* of April 7, 1911:

“In an explosion that was heard throughout the Mid-Valley, a powder house at the new Olyphant #2 shaft of the D & H Company, blew up at 10:30 o’clock last night. Several buildings in the vicinity of the powder house were shaken and the window lights in them shattered by the concussion. No one was injured. / The powder house was located near the new shaft, which is being sunk a half mile from the D & H station in Olyphant. It contained several boxes of dynamite and a quantity of black powder, which is being used by the contractors who are sinking the shaft. The cause of the explosion could not be learned last night, the watchman at the colliery declaring that no persons had been near the powder house for more than one hour before the explosion. The roof was blown off the building and several barrels of oil, which were stored in the structure, were broken open by the explosion their contents taking fire and sending up a blaze that could be seen for miles.” (*Scranton Republican*, April 7, 1911; reported by Bob McDonough, *Murphy*, p. 52)

On June 8, 1912, Edward Owens, Olyphant, was killed instantly in Grassy Island shaft #2, at about 9 A.M. The body was found around 4 P.M. that day. In the *Scranton Republican* of June 10, 1912, we read:

“Edward Owens, of Line Street, Olyphant was instantly killed in Grassy Island shaft #2 about 9 o’clock Saturday morning. The body was found about 4 o’clock in the afternoon by company men.” (*Scranton Republican*, June 10, 1912; reported by Bob McDonough, *Murphy*, p. 67)

Given below is an undated newspaper clipping, possibly from 1933, from *The Scranton Republican*, titled “*Attempt to Destroy Fan and Close Mine Of Hudson Coal Co.*” The mine in question was the Grassy Island mine of the Hudson Coal Company. This clipping is in the archives of the Carbondale Historical Society.

Attempt to Destroy Fan and Close Mine Of Hudson Coal Co.

Dynamite Charge Wrecks Electrical Power Attachments at Colliery; Steam Line Connected to Revolve Blades; Local Group to Meet Wagner and Ask Intervention

An attempt to tie up the Grassy Island mine, Hudson Coal company, by wrecking the fan with a charge of dynamite was made yesterday.

State police investigating the bombing attribute the outrage to agitators of the outlaw mine strike. The blast crippled the electrical lines and fixtures but failed in its wrecking purpose as company officials immediately attached steam power to the rotating mechanism.

Idle Several Months

Had the dynamiters been successful the operation, which reopened last week after being idle for several months, would have to shut down until the fan was replaced. Miners are dependent upon the fans for air while at work in the underground chambers. Any interference with the circulation necessitates an immediate shutdown.

Yesterday's dynamiting was the third attempt made since last Saturday to plunge the colliery into idleness. The tressle leading to the Olyphant breaker was bombed on Saturday and a charge was exploded along the steam power line early yesterday. Repairs were made. The Anthracite Miners of Pennsylvania concentrated their picketing drive upon the colliery after it was reopened. Picketing failed to reduce the working forces. The steam line and fan dynamitings were the 24th and 25th bombings to be attributed to strike agitation in this county in the past six weeks.

The fan house bombing was the only outbreak to occur in both counties yesterday. Thirteen pickets were picked up by city police on charges of disorderly conduct near the Baker colliery. They were discharged following reprimands by Magistrate John P. Kelly. The pickets gave the names of Tony Mallie, 1629 Bundy street; Henry Gandie, 1105 Dorothy street; Frank Bianca, Fisk street; Andrew Barella, 1032 West Linden street; James Perozazie, 1921 Prospect avenue; Michael Pelrarri, 525 Ripple street; Roy Centi, 317 Fairview avenue; John Pammoni, 1023 Brown court; Frank Vegranni, 920 West Lackawanna avenue; Martin Luki, 430 North Ninth avenue; Monganni Reladi, Thomas Bosellini and Pasquale Capolongo, all of 436 North Main avenue.

To Meet Wagner

Thomas Murphy, president, and Raymond B. Gibbs, executive secretary, of the Chamber of Commerce, will represent this city at a conference with Senator Robert Wagner, state recovery board, at Washington today. They will accompany a group of business men from Pittston and Wilkes-Barre.

John Boylan, president of District 1, United Mine Workers, yesterday declared that 95 per cent of the Glen Alden miners in Luzerne county would be at work if given the same protection as was given "during the legal strike several months ago at the mine of the Kehoe-Berge company, Duryea. Boylan charged that the miners are being intimidated by the A. M. of P. followers.

Stanley Wojiaelewicz, 28; Joseph

(Continued on Page Four)

Attempt to Destroy Eddy Creek Fan House

(Continued from Page Three)

Asika, 25, and Anthony Beckus, 24, three Hudson men were released last night when arraigned before Justice of the Peace Howell Evans at Wyoming, for lack of evidence.

The three men alleged by the state police to be mine pickets were apprehended at 2 o'clock yesterday morning at Plains while riding in a sedan. In the sedan they had four beer cases filled with round rocks.

Gravity Slope Colliery

The Gravity Slope Colliery was in Archbald.

The following article about the Gravity Slope colliery in Archbald was published in *The Valley Advantage*, February 3, 2012, p. 1:

Gravity Slope Facelift Planned

Scranton Chamber group boosts Archbald project

by Christopher Cornell
ADVANTAGE EDITOR

The problem: The deteriorating state of the Gravity Slope colliery above Archbald. The colliery opened in 1913, and closed in 1955. Thress structures remain at the site, including the 654-square-foot oil house, so named because bulk oil shipments were stored.

Since 2005, as a non-profit organization, the Gravity Slope Committee has been working to preserve and restore the buildings in co-operation with the Borough of Archbald. The ultimate goal is to restore all three buildings at the site as a museum and historical center, preserving and teaching the history of coal mining to future generations of visitors and local residents.

Funding and manpower, however, have been lacking.

Enter Leadership Lackawanna. Created in 1982 under the sponsorship of The Greater Scranton Chamber of Commerce, every year a Leadership Lackawanna "class" of working professionals takes on a special project for the betterment of Lackawanna County and its residents. The Leadership Lackawanna Class of 2012 has taken on the Gravity Slope colliery, specifically the oil house, as the focus of its efforts this year.

The project, entitled "Restore the Slope," is aimed at completing restoration of the oil house. The team includes Hemal P. Desai of Proctor & Gamble, Susan A. Micka of Prudential Retirement, Lisa A. Deal of Geisinger Health Systems, Lisa A. Konzelman of Baptist Bible College & Seminary, Becky J. Snyder of Allied Services, Gerard M. Hetman and Michael C. Baumhardt of The University of Scranton.

"The Gravity Slope Authority is delighted to have attracted the help of Leadership Lackawanna," said David Lamereaux, chairman of the Gravity Slope Colliery Authority. "The oil house represented an important part of Anthracite mining history in Lackawanna County. At one point, nearly 1,700 local miners depended on it for oil to lubricate mining cars, gears, and to light their lamps. Without the assistance of Leadership Lackawanna, restoration of the oil house may have seen a long delay."

Restoration work at the oil house site is set to include (but is not limited to) roof repair/ replacement, ceiling construction, door and window replacement, brickwork/masonry repair, graffiti removal, painting, construction of new entryway stairs, exterior site cleanup, and landscaping.

The team is seeking monetary donations in any amount, as well as in-kind donations of labor and construction material. The group is planning to hold a series of fundraising events in and around Archbald and the greater Valley View area, with a goal of completing restoration of the oil house by June.

Kicking things off late last year was a Lackawanna County Arts and Culture project grant of \$3,000. Maureen McGuigan, Deputy Director of Arts and Culture said the grant review panel "felt it was a project highlighting the unique cultural history of Lackawanna County, and one that will allow the public to experience history in an accessible, hands-on way."

Parties interested in making a donation to the Restore the Slope project can contact the group via email at restoretheslope1@gmail.com, or by writing Restore the Slope, c/o Leadership Lackawanna, 222 Mulberry St., Scranton, PA 18501.



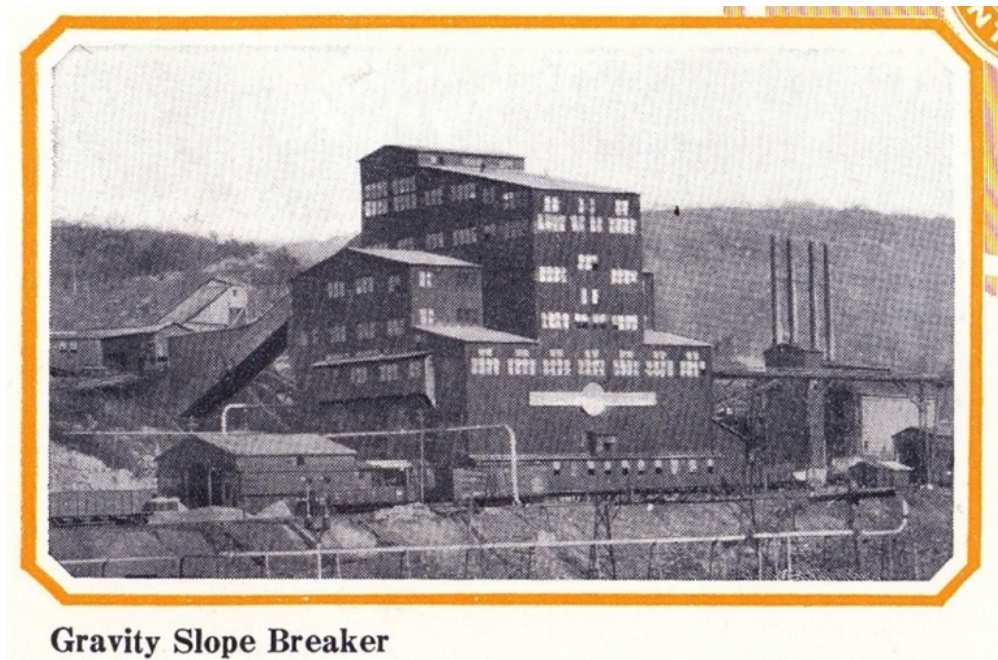

The Restore the Slope team is. from left, front row: Lisa Konzelman, Becky Snyder, Hemal Desai and Lisa Deal. Second row: Susan Micka, Gerard Hetman and Michael Baumhardt.

A front view of the oil house, part of the Gravity Slope colliery complex in present condition.

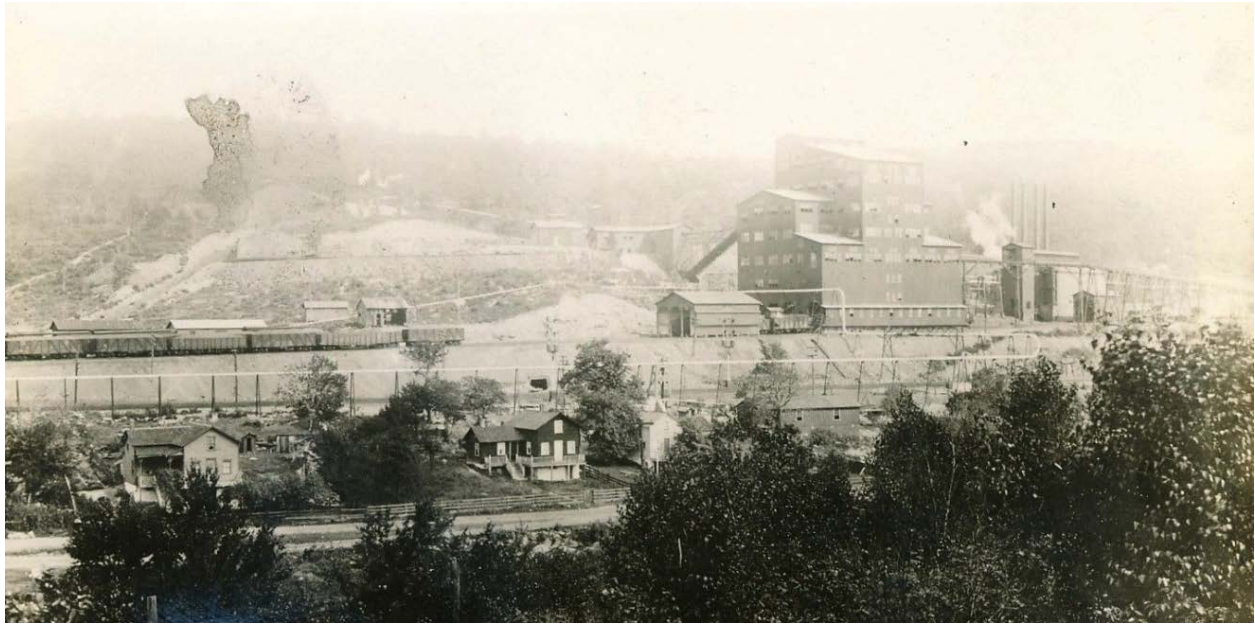
Here is some information about the Gravity Slope Colliery that is on a handout from the Archbald group that is focused on the restoration of the Gravity Slope Colliery:

“The Gravity Slope Colliery was opened in 1913 when the White Oak Breaker was shut down. / At one time there were 1700 men employed at the Gravity Slope Colliery and three full shifts worked day and night. There were 120 mules in use and it used to be a sight every morning, when the boys would drive the mules from the old White Oak Mule Barn down the tracks to the mines. The main mine, which was a slope and was appropriately named Gravity Slope after the colliery, was opened in 1911. / The Gravity Slope Colliery was the center of activity in town for many years. In 1942, the conveyor line to the top of the breaker collapsed and the breaker was permanently shut down. The coal from the still working colliery was shipped to the Powderly Breaker in Carbondale and the Marvin Breaker in Scranton. Soon afterwards the Gravity Slope Breaker was dismantled. The mines at the colliery were worked until 1955 when water began seeping through the coal seams into the Delaware & Hudson mines from the shutdown of the Riverside mines. This became too much for the mine pumps to handle. On October 4, 1955, the Gravity Slope Colliery shut down for good, ending the Delaware & Hudson mining in the Borough, one hundred and ten years after their first mine opened in 1845. / The Gravity Slope presently consists of a completely overgrown site with three buildings, the Shifting Shanty, the Fan House and the Oil House. The buildings are in disrepair due to a lack of maintenance. The entry to the mine is also present on the site. The opening has been sealed, but is recognizable and will be used as a site attraction.”

Here is a photograph of the Gravity Slope Breaker that is given in the Hudson Coal booklet, 1929:



Here is a photograph from 1909 of the Gravity Slope Breaker that is in the photographic holdings of the Carbondale Historical Society:

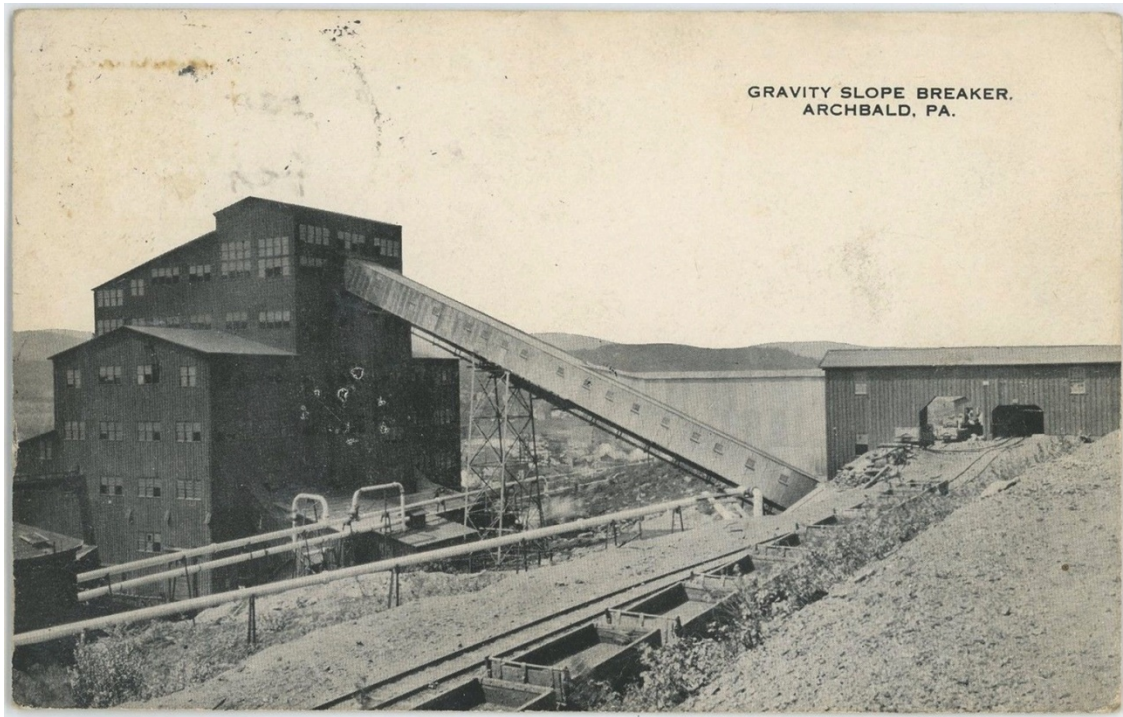


Gravity Slope Breaker, Archbald

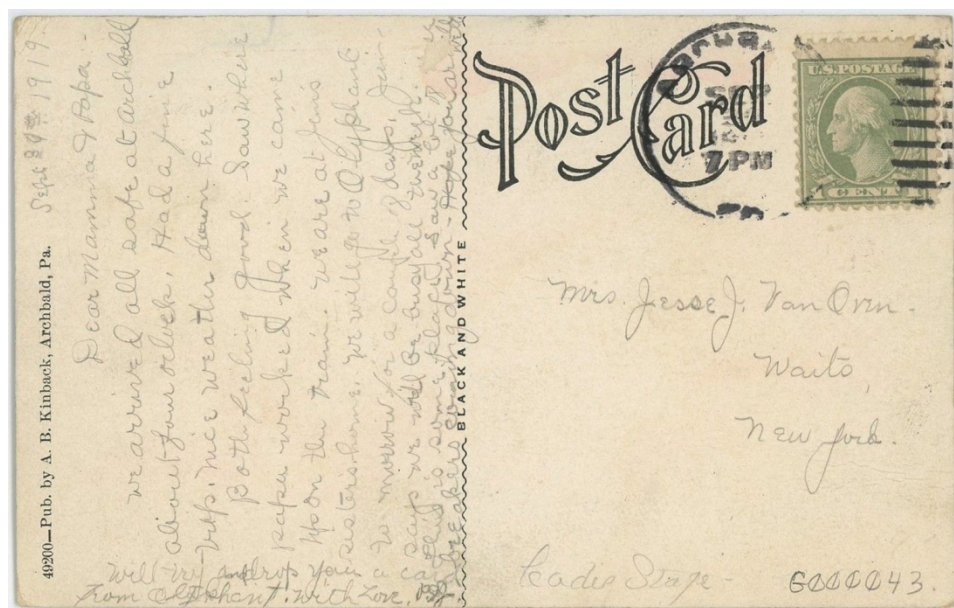
G. B. Fillmore, president of Hudson Coal Co. announced on March 26, 1954 that operations would end at the Gravity Slope Colliery, Archbald, around April 15, idling about 85 men. Operations were discontinued at the Gravity Slope Colliery on April 14, 1954.

Photo note: Horgan photo, p. 44, "Slush Bank 'Y' at Jessup Looking South," #192193, c. 1919. "Gravity Slope Colliery, Archbald, Lackawanna County, PA. The Mt. Jessup Breaker, Mt. Jessup Coal. Ltd., can be seen in the background."

Here is a post card photograph of the Gravity Slope Breaker, Archbald. Thanks to John V. Buberniak this post card was added to the photo archives of the Carbondale D&H Transportation Museum on May 11, 2017.



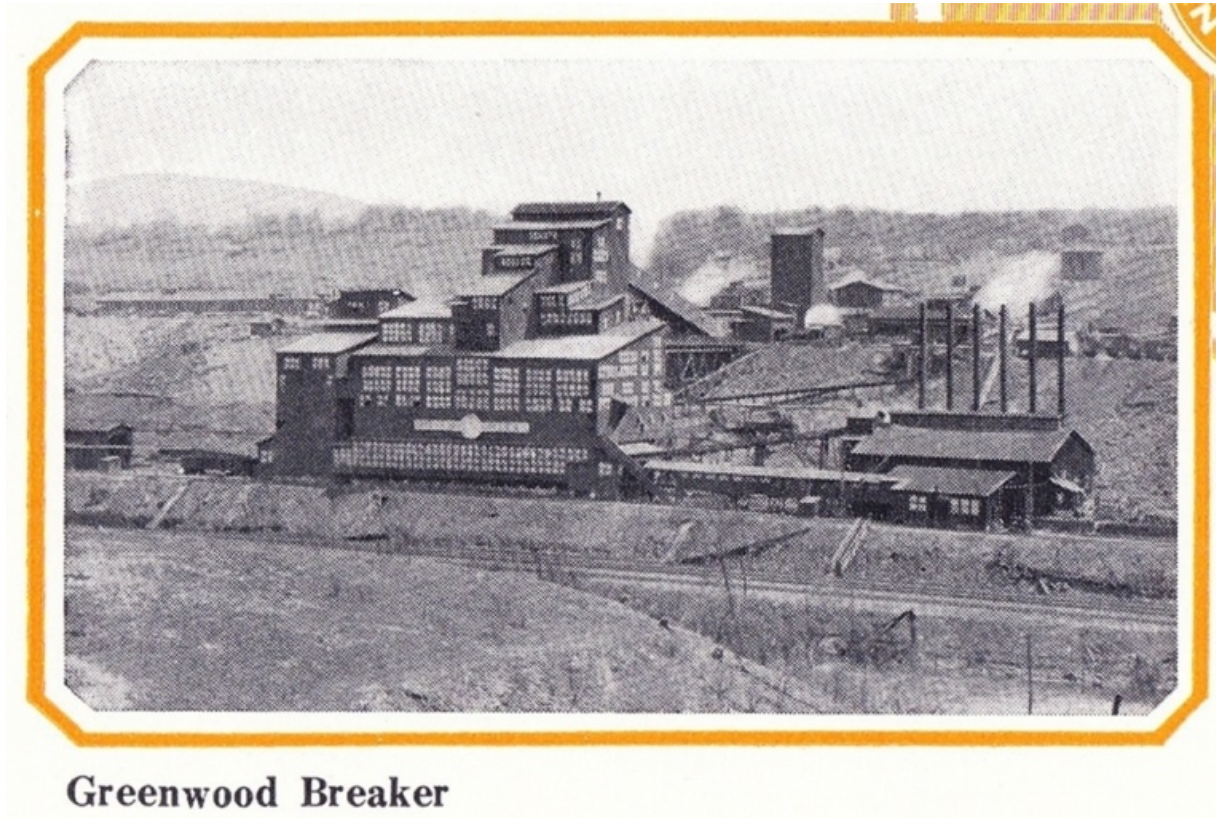
Back of post card shown above:



1858

Greenwood Breaker

Shown below is a photo of the Greenwood Breaker from the Hudson Coal Co. booklet, 1929



1859

Hendrick Breaker

The Hendrick Breaker, also known as the Chestnut Hill Colliery, was located 80 feet above the light track on the Gravity Railroad in Carbondale.

On January 2, 1873, the first coal was run through the Hendrick breaker, which was a joint venture of Eli Hendrick and Elias Thomas. In the *Carbondale Advance* of January 4, 1873, we read:

“Resigned. / Mr. Elias Thomas, for many years one of the mining bosses of the D. & H. C. Co. in this city, has resigned his position, for the purpose of giving his whole attention to the coal business in which he has engaged with Mr. Hendrick. They run the first coal through their Breaker on Thursday.” (*Carbondale Advance*, January 4, 1873, p. 3).

In addition to serving the D&H as a mine boss, Elias Thomas also, at one time, looked after the horses at the stable between Planes 2 and 3; he also served as night watchman at Plane 28.

The start up of operations at the Hendrick/Thomas breaker was also the subject of a notice in the *Carbondale Leader*, as follows:

"Mr. Elias Thomas who has been a faithful, trusty and efficient employe of the D. & H. C. Co. in the coal mining department at this city for several years past, resigned his responsible position a few days since for the purpose of putting the breaker in operation recently completed on the tract of coal lands purchased by Mr. Hendricks and himself. Their machinery was put in motion on Monday of this week." (*Carbondale Leader*, January 11, 1873, p. 3)

By means of a large space ad, 7" x 7 ¾", on page 2 of the January 11, 1873 issue of the *Carbondale Advance*, Hendrick & Thomas offered for sale their coal to the public. Here is the text of that ad:

"PREPARED COAL! / HENDRICK & THOMAS, / Having finished their new Coal Breaker, are now ready to supply / **WELL PREPARED COAL OF ALL SIZES,** / At the following prices, delivered: /**GRATE, EGG AND STOVE, \$2.75, CHESTNUT, \$2.50, PEA, \$1.75** / per Ton. PLEASE GIVE OUR COAL A TRIAL. / Office for Receiving Orders with J. M. POOR, / No. 318 NORTH MAIN STREET, CARBONDALE. / January 11, 1873."

By April, 1874, the capacity of the Hendrick/Thomas coal operations had doubled, and the breaker was then capable of preparing three hundred or more tons of coal a day. The D&H contracted with Hendrick/Thomas to take all the coal they mined, with the exception, of course, of what they sold to local customers. The Hendrick/Thomas breaker was 80 feet higher up the mountain than the light track of the Gravity Railroad. It was, therefore, so arranged that the loaded cars from the breaker, in descending the plane from the breaker to the light track, would draw the unloaded ones up the plane, thereby reducing the cost of getting the Hendrick coal into the D&H cars. As such Hendrick was able to increase production and hire more men and boys to work in his operations. In the *Carbondale Leader* of April 25, 1874, we read the following about the Hendrick/Thomas operations:

"Mr. E. E. Hendrick has doubled the preparing capacity of his coal breaker by building a large addition to the north side. The breaker is now capable of preparing three hundred or more tons of coal per day. Mr. Hendrick has made a contract with the D. & H. C. Co. to take all the coal he mines, with the exception of what he sells to local customers. A plane and car track is nearly

completed from the light track of the company's road to the breaker, which is eighty feet higher than the railroad. It will be arranged so that the loaded cars in descending the plane will draw the unloaded ones up. By this means the coal can be got into the Company's cars at a very small cost; and Mr. Hendrick is therefore enabled to mine much more coal than he has heretofore, and can give employment to an extra number of men and boys." (*Carbondale Leader*, April 25, 1874, p. 3)

In September 1874, the coal that was produced at the Hendrick Colliery in excess of that needed for local customers was shipped west by the Erie. In the *Carbondale Leader* of September 18, 1874, we read:

"Work was resumed in Mr. Hendrick's Chestnut Hill Colliery, on Monday. About fifty tons per day have been mined this week. The breaker is now capable of preparing over a hundred tons per day, and that amount will be mined when they get everything in good running order. At present the coal is being delivered to the cars in wagons and shipped west by the Erie." (*Carbondale Leader*, September 18, 1874, p. 3)

In October 1874, the Hendrick breaker was "in full blast," with over one hundred tons of coal produced daily, the most of which, except for what was sold in Carbondale, was shipped over the Jefferson Branch of the Erie Railroad. In the *Carbondale Leader* of October 17, 1874, we read:

"E. E. Hendrick's breaker on the hill is in full blast. Over one hundred tons of coal are daily mined and prepared for market, the most of which, except what is sold in town, is shipped over the Jefferson Branch." (*Carbondale Leader*, October 17, 1874, p. 3)

On September 5, 1878, Eli E. Hendrick, gentleman and entrepreneur, received from the carriage shop of N. Moon, & Bro., the most splendid and elaborately built Platform Spring Wagon, yet made in Carbondale. That elegant wagon is described in the following article that was published in the September 7, 1878 issue of the *Carbondale Advance*:

"An Elegant Wagon. / On Thursday of this week, E. E. Hendrick, Esq. received from the carriage shop of N. Moon, & Bro., the most splendid and elaborately built Platform Spring Wagon, yet made in our town. It is three seated, light, roomy, and a model of workmanship throughout. The woodwork was constructed by L. I. Bunnell, the iron work by Mr. Moon, the painting was done by Hollis & Lacy, and the upholstering by Mr. Patterson, and each seem to have striven for absolute perfection in their line. Combined they have produced a wagon creditable to them, and to the town, and which we hope Mr. Hendrick may long enjoy. / Mr. P. M. Moffitt has furnished Mr. Hendrick with an elegant harness, suitable for the new carriage, completing the fine turnout." (*Carbondale Advance*, September 7, 1878, p. 3)

In December 1879, L. A. Basset and John Herbert leased the Hendrick mines and breaker and engaged in the coal business under the firm name of John Herbert & Co. In the *Carbondale Advance* of December 20, 1879, we read:

“Messrs. L. A. Bassett and John Herbert have leased E. E. Hendrick’s mines and breaker, and engaged in the coal business, under the firm name of John Herbert & Co.” (*Carbondale Advance*, December 20, 1879, p. 3)

The Hendrick vein of coal was far reaching. About it, we read the following in the September 10, 1881 issue of the *Carbondale Advance*:

“The vein of coal known as the Hendrick vein underlies nearly all the land about the city, which has been regarded as coal land, as yet scarcely touched.” (*Carbondale Advance*, September 10, 1881, p. 3)

The lodge of the Brotherhood of Railroad Trainmen in Carbondale was the E. E. Hendrick Lodge No. 94, Carbondale, Pa., of the Brotherhood of Railroad Trainmen.

The beginnings of the Brotherhood of Railroad Trainmen date to June, 1883, in Oneonta, NY, when eight brakemen met in D&H caboose No. 10 (the caboose was assigned to Charles J. Woodworth, who was one of the party) to discuss working conditions on the railroads and to bring into existence a protective and insurance organization. Realizing, as they did, that passing the hat whenever a co-worker died was ineffective, those rail workers formed the brotherhood to provide a benefit in case of death (at the time \$300.00).

On September 23, 1880, the Grand Lodge of the "Brotherhood of Railroad Brakemen" came into existence. The Oneonta lodge was called "E. V. Debs Lodge No. 1" in honor of Eugene Victor Debs, Grand Secretary & Treasurer of the Brotherhood of Locomotive Firemen. The name of the organization was changed October 23, 1889 to the "Brotherhood of Railroad Trainmen." By the time of its merger with three other railroad labor unions, to form the United Transportation Union, in 1969, it had the greatest membership of any of the operating railroad brotherhoods.

The rail service members of the BRT included conductors and their assistants, dining car stewards, ticket collectors, train baggagemen, brakemen, and train flagmen. The yard service members of the BRT included yardmasters, yard conductors, switchtenders, foremen, flagmen, brakemen, switchmen, car tenders, operators, hump riders, and car operators.

On September 23, 1924, Caboose No. 10, restored by the D&H, was placed in its present location beneath a reinforced concrete pagoda in Neahwa Park, Oneonta, on a site donated by the city. Present at the dedicatory ceremonies on September 23, 1924 were the following principal speakers: William G. Lee, president of the Brotherhood of Railroad Trainmen; Lieutenant Governor George R. Lunn; and Colonel James T. Loree, vice president and general manager of the D&H. On each side of the caboose is a metal tablet with this inscription:

BENEVOLENCE — SOBRIETY — INDUSTRY.


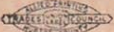
IN THIS CABOOSE, AT ONEONTA, NEW YORK, SEPTEMBER 23, 1883, EIGHT TRAIN AND YARD EMPLOYEES OF THE D. & H. CO. ARRANGED TO ORGANIZE THE B. OF R. R. B. THE TITLE WAS CHANGED OCTOBER 23, 1889, TO THE B. OF R. T.

PERSUADED THAT IT IS FOR THE INTERESTS BOTH OF OUR MEMBERS AND THEIR EMPLOYERS THAT A GOOD UNDERSTANDING SHOULD AT ALL TIMES EXIST BETWEEN THE TWO, IT WILL BE THE CONSTANT ENDEAVOR OF THIS ORGANIZATION TO ESTABLISH MUTUAL CONFIDENCE AND CREATE AND MAINTAIN HARMONIOUS RELATIONS.

The E. E. Hendrick Lodge No. 94 of the Brotherhood of Railroad Trainmen was in Carbondale. The Lodge met at the Central Labor Union hall on the second and fourth Tuesday of the month. The auxiliary of that Brotherhood of Railroad Trainmen met at the Central Labor Union hall on the second Friday and the fourth Saturday of each month.

Three Brotherhood of Railroad Trainmen certificates (one Class C Beneficiary Certificate, July 17, 1920; one Class D Beneficiary Certificate, August 17, 1926; and one Individual Reserve Certificate—yearly renewable term plan with disability benefits, Class I. R. 1, May 1, 1934) were donated to the Carbondale D&H Transportation Museum on June 25, 2011 by Joseph Bernard Henning (Fell Township, PA), whose great uncle and godfather was Bernard A. Nevin, who lived at 296 Dundaff Street and who was a member of E. E. Hendrick Lodge No. 94.

A copy of Bernard A. Nevin's paid dues receipt (front and back) for February 1956 in the Brotherhood of Railroad Trainmen is shown below:

BROTHERHOOD OF RAILROAD TRAINMEN						
RECEIVED FROM BROTHER						
NEVIN BERNARD A						
LODGE NO.	PREMIUM		G. D.	PROT.	T. B.	TOTAL
94	307		50	75	25	457
FOR		SUB. LODGE DUES				\$ 75
Feb 1956		GEN. GRIEV. ASST. NO.				\$ 225
MONTH YEAR		LEGIS. ASST. NO.				\$ 40
DATE PAID		LOCAL GRIEV. ASST.				\$
 55		SPEC. ASSESS. NO.				\$
DUES						\$
NEXT MONTH \$						\$
J. J. Carden						\$ 797
TREASURER						TOTAL \$
COLLECTOR						

(Signature must be a Facsimile or written in Ink, or with Indelible Pencil) This Receipt Should Not Bear Seal of Subordinate Lodge Unless Order for Secret Work on Back is Filled Out.

TO BE FILLED OUT ONLY WHEN THE HOLDER REQUIRES INSTRUCTION IN SECRET WORK FROM A LODGE OTHER THAN THE ONE TO WHICH HE BELONGS

ORDER FOR SECRET WORK

THE BEARER HEREOF BROTHER _____

IMPRESS
LODGE SEAL
HERE

IS A MEMBER IN GOOD STANDING OF THIS LODGE AND IS ENTITLED TO THE SECRET WORK AND PASSWORD UNTIL THE EXPIRATION OF THIS RECEIPT. THE PRESIDENT, PAST PRESIDENT, VICE PRESIDENT OR TREASURER OF ANY LODGE TO WHOM THIS IS PRESENTED IS AUTHORIZED TO INSTRUCT HIM IN THE SAME WHEN SATISFIED HE IS THE PERSON TO WHOM THIS RECEIPT WAS ISSUED.

_____ 19____

_____ PRESIDENT

_____ SECRETARY

GEN'L SEC'Y & TREAS. _____

SEPARATE RECEIPT MUST BE ISSUED FOR EACH MONTH AND THE YEAR AND MONTH FOR WHICH DUES ARE PAID MUST BE INDICATED.

NOT GOOD UNLESS RECEIPT ON OPPOSITE SIDE IS PROPERLY FILLED OUT.

Signature In Full Of Holder _____

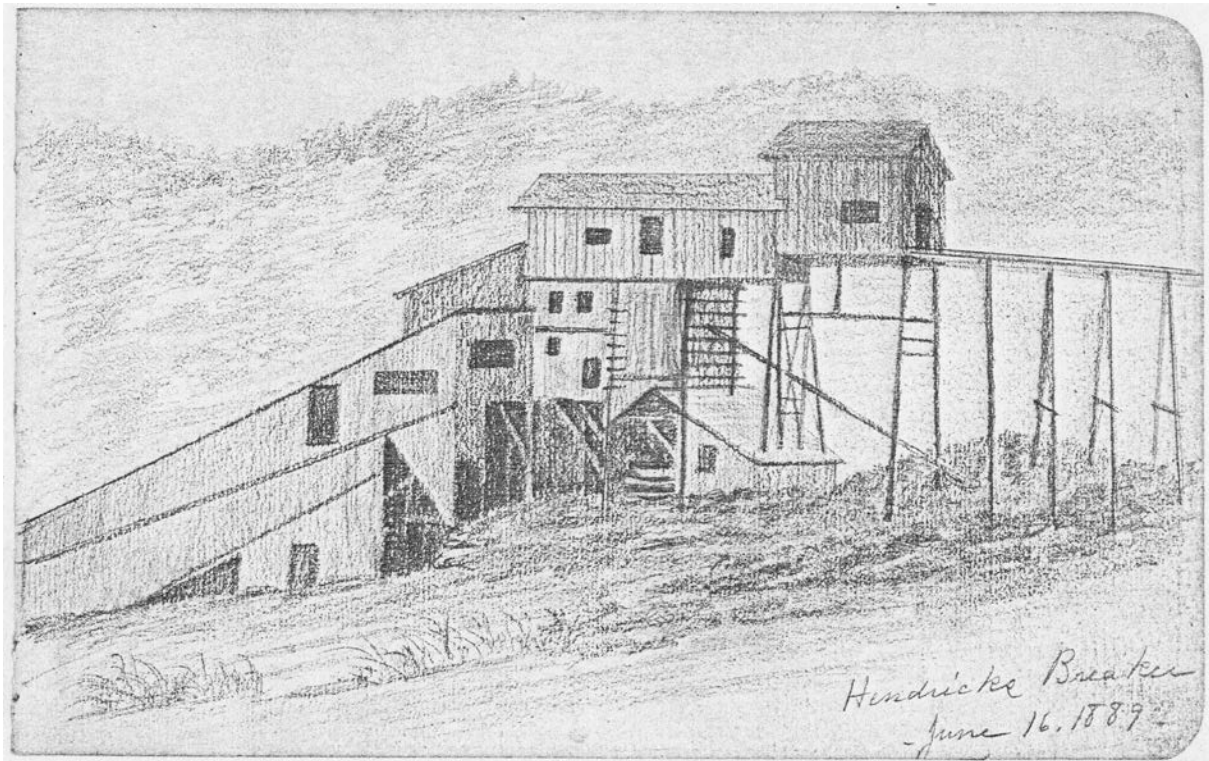
On Friday, October 22, 1886, the E. E. Hendrick Lodge of the Brotherhood of Railroad Trainmen held their annual ball in the New Opera House, Carbondale. About this event, we read the following in *The Journal* of October 14, 1886:

"The E. E. Hendrick Lodge, Brotherhood of Railroad Trainmen, will hold their annual ball in the New Opera House, on the evening of the next week Friday, Oct. 22d. They are making preparations to have it a most enjoyable affair. This is their first bid for public favor, and they should receive a liberal patronage." (*The Journal*, October 14, 1886, p. 3)

The officers of the E. E. Hendrick Lodge No. 94 of the Brotherhood of Railroad Trainmen for 1887-1888 were announced in *The Journal* of September 8, 1887, as follows:

"The Railroad Brakemen. / The following officers of the E. E. Hendrick Lodge, No. 94, Brotherhood of Railroad Brakemen, were installed at their last regular meeting to serve for one year: / Master—P. E. Dockerty. / Vice Master—Alonzo Hoyle. / Secretary—William Leonard. / Financier—John F. Roberts. / Chaplain—Horton Dilts. / Conductor—F. H. Porter. / Warden—Samuel Ferrel. / O. G.—Vincent Swingle. / I. G.—Horace Ferrel. / Post Maser—Wm. B. Evans. / Thomas Monahan was elected delegate and Charles Clark alternate delegate, to the Grand Lodge, which meets in Binghamton next month." (*The Journal*, September 8, 1887, p. 3)

On June 16, 1889, M. B. Ricker did a sketch of the Hendrick Breaker. Shown below is "Hendricks Breaker, June 16, 1889" from the M. B. Ricker sketch book titled "Carbondale Sketches – Summer of 1889 M. B. Ricker," in the collection of the Russell Homestead, Carbondale.



Hendrick Breaker by M. B. Ricker, June 16, 1889

Hendrick/Colville Note:

In the December 30, 1884 issue of the *Carbondale Leader*, we read the following notice:

“Prof. W. T. Colville, of Kenyon College, Ohio, is the guest of E. E. Hendrick and family.”
(*Carbondale Leader*, December 30, 1884, p. 1)

W. T. Colville would ultimately be brought to Carbondale by E. E. Hendrick, to become the teacher of his two daughters in the school that E. E. Hendrick established on the grounds at Hendrick Park for his children. One of those two daughters, Lillian, ultimately married W. T. Colville.

1860

Herbert Breaker

Herbert Coal Company

John Herbert and L. A. Bassett leased the mines and breaker of Eli E. Hendrick in 1879, and engaged in the coal business under the firm name of John Herbert & Co. Here is the announcement of that lease arrangement that was published in the *Carbondale Advance* of December 20, 1879:

"Messrs. L. A. Bassett and John Herbert have leased E. E. Hendrick's mines and breaker, and engaged in the coal business, under the firm name of John Herbert & Co." (*Carbondale Advance*, December 20, 1879, p. 3)

1861

Hillside Coal and Iron Company Collieries

In 1886, it was reported in the *New York Coal Trade Journal*, the Hillside Coal and Iron Company had four collieries in the vicinity of Scranton and Carbondale: Consolidated Breaker, Erie Breaker, Keystone Breaker, and Forest City Breaker. Here is that notice from the *New York Coal Trade Journal*, as reprinted in the *Carbondale Leader* of August 24, 1886:

"The Hillside Coal and Iron Company, under the management of Mr. W. A. May, have four collieries in the vicinity of Scranton and Carbondale. They are the Consolidated Breaker, Erie Breaker, Keystone Breaker and Forest City Breaker, with a united capacity of 2,400 tons per day, all of which is shipped East. About 1,200 men and boys are employed. The Archbald (one of the veins on which they are operating) varies in thickness from four to twelve feet in clear coal. The whole of this vein does not contain more than ten inches of impurity at the highest. They also work the Pittston vein and others, the former runs from seven to twelve feet in thickness. . . ." (from the *New York Coal Trade Journal*, as reported in the *Carbondale Leader*, August 24, 1886, p. 4)

In March 1890, the mines of the Hillside Coal and Iron Company, located in and about Mayville, were working half time. That we know from an announcement that was published in the *Carbondale Leader* of March 13, 1890, as follows:

"THE HILLSIDE COAL CO. / The Mines Working Half Time and the Company Stocking its Coal. / The mines of the Hillside Coal and Iron company, located in and about Mayville, are working half time. In conversation with Mr. May, of the company, that gentleman informed a

Scranton Times reporter last evening, that while the outlook was not so favorable for the anthracite coal trade, his company was stocking their coal at Piermont dock, on the Hudson, where they have now over 100,000 tons. The company prepare for market about 7,500 tons daily. 'The anthracite coal,' said Mr. May, 'is principally used for domestic purposes, hence the market depends in a great measure on the weather. The bituminous trade has control of the manufacturing market, because it is cheaper fuel, and has other advantages over anthracite. If a manufacturer wants a clean boiler room, clean surroundings and has ample boiler room, he uses anthracite, but if he desires quick steam, and cheap fuel, he uses bituminous.' . . . " (*Carbondale Leader*, March 13, 1890, p.4)

On October 31, 1896, eighteen miners from the Hillside Coal and Iron's Forest City mines and as many from the company's Mayfield mines, traveled to New York City to march in the monster Republican parade there that day. In that parade, it was expected that 130,000 men would march. The miners went to New York on invitation of the Coal Trade club. Here is the announcement of this remarkable event that was published in a Carbondale newspaper (clipping in one of the Gritman scrapbooks):

"OFF FOR N. Y. / Thirty-six Miners Leave to Take Part in the Grand Parade in the Metropolis. / A company of thirty-six miners from this vicinity will be the star feature of the fifth division of the monster Republican parade in New York city to-day. Eighteen of them are from the Hillside Coal & Iron company's Forest City mines and as many from the company's Mayfield mines. They will be under the command of W. W. Inglis, of the company's general office, and captain W. A. May, the company's general manager, will march with them. / The miners have been assigned the honorary position at the right of the line of the fifth division, which is that of the Coal Trade Sound Money club. They will be clad in every day working togs, including boots, caps, lamps, etc., and will carry picks. They will be the escort of the club banner. / The Seventy-first Regiment band, one of the finest musical organizations of its kind in New York city, will head the division and behind it will march the miners ahead of division marshal Robert Olyphant, of the Delaware and Hudson company, and his staff of aides. There will be three battalions and over 5,000 men in the division. About 130,000 men will be in line and as but 12,000 can pass a given point in one hour, it is estimated that the parade will be moving over eleven hours. As each division passes the point of review it will be disbanded. / The miners go to New York on invitation of the Coal Trade club. They have been drilled in the manual of arms with the pick and in marching and in their office of banner escort are expected to be one of the novel features of one of the biggest campaign parades in the history of the country. The miners left on this morning's train." (clipping in Gritman scrapbook, dated Saturday, October 31, 1896)

Collieries owned by the Hillside Coal and Iron Company in 1897 and 1898: Glenwood, Erie, Keystone, Forest City, and Clifford.

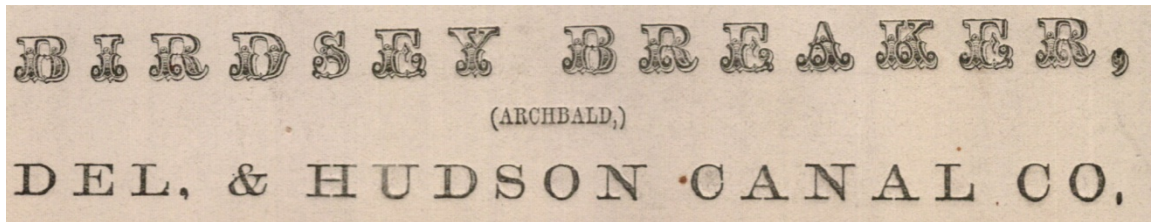
Hosie & Company Colliery

The Birdseye Breaker, Archbald, was erected in 1860 on east side of the Lackawanna River, on the site where the White Oak Breaker used to stand. It was owned by Judge Birdseye, a resident of Brooklyn, N. Y. The colliery was leased by Hosie & Co., and coal from the breaker was delivered to the Delaware & Hudson. The Birdseye Breaker was on the Gravity Railroad light track, and coal was probably sent from the breaker northward to the foot of Plane 26, for shipment northward to market.

In 1861, a case involving some intricate and perhaps not well defined points of law was brought before Earl Wheeler, Esq., of Honesdale. The case centered on the Birdseye Breaker in Archbald which was leased by Hosie & Co. The relevant facts are presented in the following article that was published in the *Carbondale Advance* of April 6, 1861:

“Important Suit. / A case involving some intricate and perhaps not well defined points of law was tried here, a few days since, before Earl Wheeler, Esq., of Honesdale, as Referee. The parties were Judge Birdseye v. The Home Insurance Co. The claim was \$1,090, for damages by fire in a Coal Breaker in Archbald. The plaintiff, Judge Birdseye, is a resident of Brooklyn, N. Y., but owns extensive tracts of Coal land in our Valley, upon one of which is a Colliery leased by Hosie & Co, from which coal is delivered to the Del. & Hud. C. Co. A Coal Breaker was erected at these works, in Archbald, last season, at which operations were commenced in September. After about two weeks, it was found that the ground or rather the coal culm, underneath the breaker and its walls were on fire, and the total destruction of the entire structure was threatened. To prevent this the lessees, Hosie & Co., acting from their own judgment, confirmed and approved by the advice of all skilled in such matters, suspended operations, tore down the walls, rolled out the boilers, and after much toil, labor and expense put out the fire and rebuilt the walls. After this experience of the liability of the culm to take fire, they dug through it and placed the new walls upon the ground. In the first instance; they had placed plank upon the culm, and a few inches of dirt only upon the plank under the boilers. Upon taking down the walls, the culm had been found on fire both under the boilers and outside of the walls. /From these facts, which we state in brief as we gathered them from the statements of the witnesses, our readers will see the points involved. / We understand there is little if any dispute on the question the necessity and propriety of what was done after the fire was discovered. The question, we believe, is whether or not the erection of the structure over such basis—coal culm—and the taking fire of which produced the difficulty, relieves the Insurance Company of their liability. / The suit, as we are informed, is in a measure an amicable one to determine the points of law involved. The Referee has not yet declared his decision. / The plaintiff, Judge Birdseye, was assisted by D. N. Lathrope, Esq. S. E. Dimmick, Esq., for defendant.” (*Carbondale Advance*, April 6, 1861, p. 2)

Here is the photo of the Birdseye Breaker that was taken by Johnson in 1860. The original from which the copy given here was produced is in the archives of the Wayne County Historical Society.



Birdseye Breaker, (Archbald,) Del. & Hudson Canal Co., photograph by Johnson, 1860

The Birdseye Breaker is also seen in the photograph given on the following page by Johnson (Scranton, Pa., 1860) in the photograph titled “Archbald.” In this second view of the breaker, the view is from on the hill above the breaker looking down into the community of Archbald. Here is a detail of that Johnson view:

ARCHBALD,
DEL. & HUDSON CANAL CO.



Detail of *Archbald, Del. & Hudson Canal Co.*, photograph by Johnson, 1860. The Birdseye Breaker (built on the site formerly occupied by the White Oak Breaker) is in the foreground.

Here is the right side of the Johnson photograph shown above. The body of water to the left of the Lackawanna River is the canal that powered the waterwheel at the foot of Plane 21.

Lackawanna River

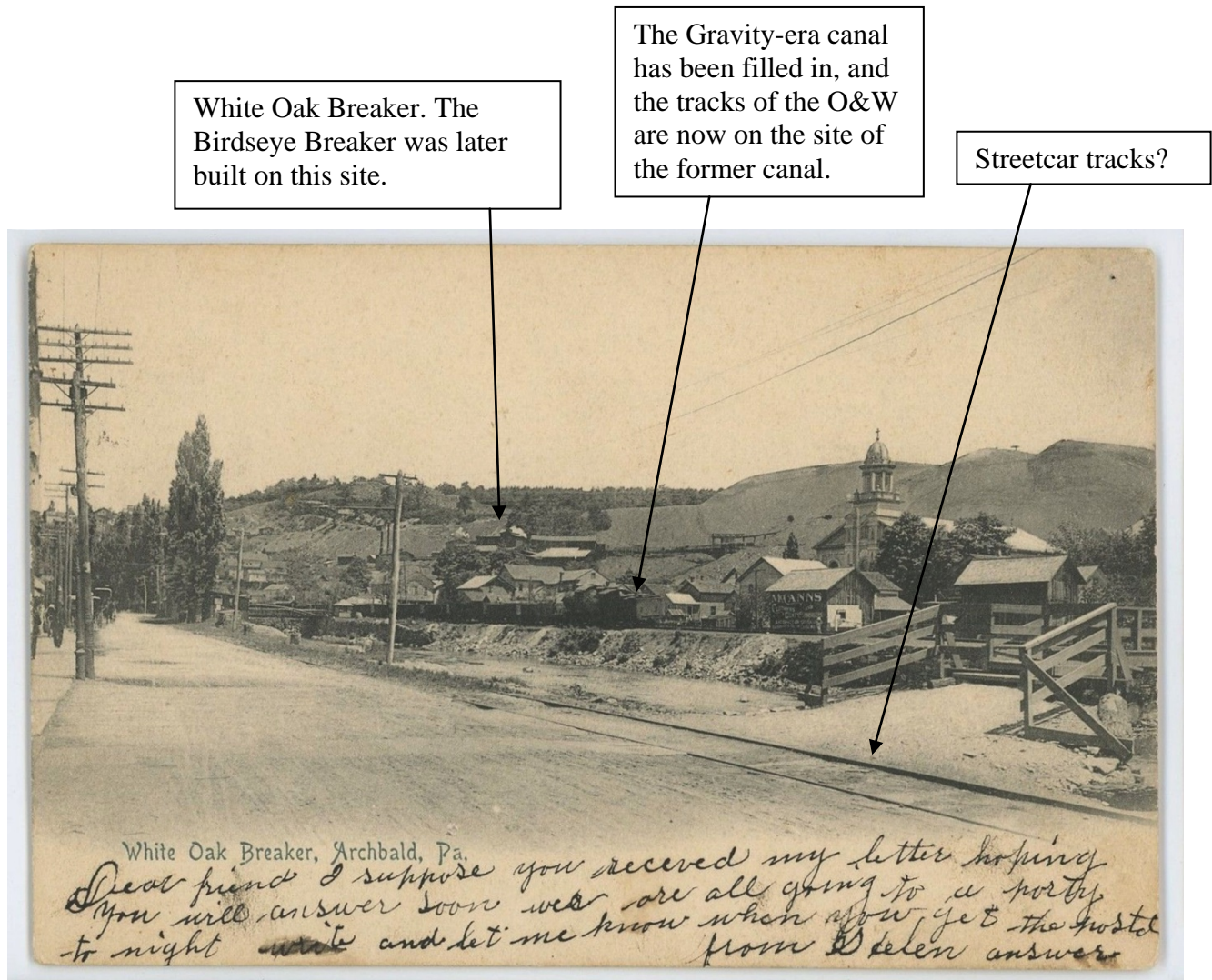
Canal that provided the water that powered the water wheel at the foot of Plane No. 21



A portion of the Birdseye Breaker, which was built on the site of the former White Oak Breaker (on the eastern side of the Lackawanna River)

Detail of *Archbald, Del. & Hudson Canal Co.*, photograph by Johnson, 1860.

Photo post card view of "White Oak Breaker, Archbald, Pa." This post card was added to the collection of the Carbondale D&H transportation Museum on May 11, 2017, courtesy of John V. Buberniak.



White Oak Breaker, Archbald, Pa.

Reverse of post card shown on preceding page:



Photo post card view of "View of North Archbald, Pa." This post card was added to the collection of the Carbondale D&H transportation Museum on May 11, 2017, courtesy of John V. Buberniak.

Birdseye Breaker, North Archbald. The White Oak Breaker was formerly on this site.

A previous owner of this post card used nails, it appears, to display this card on a wall.



View of North Archbald, Pa.

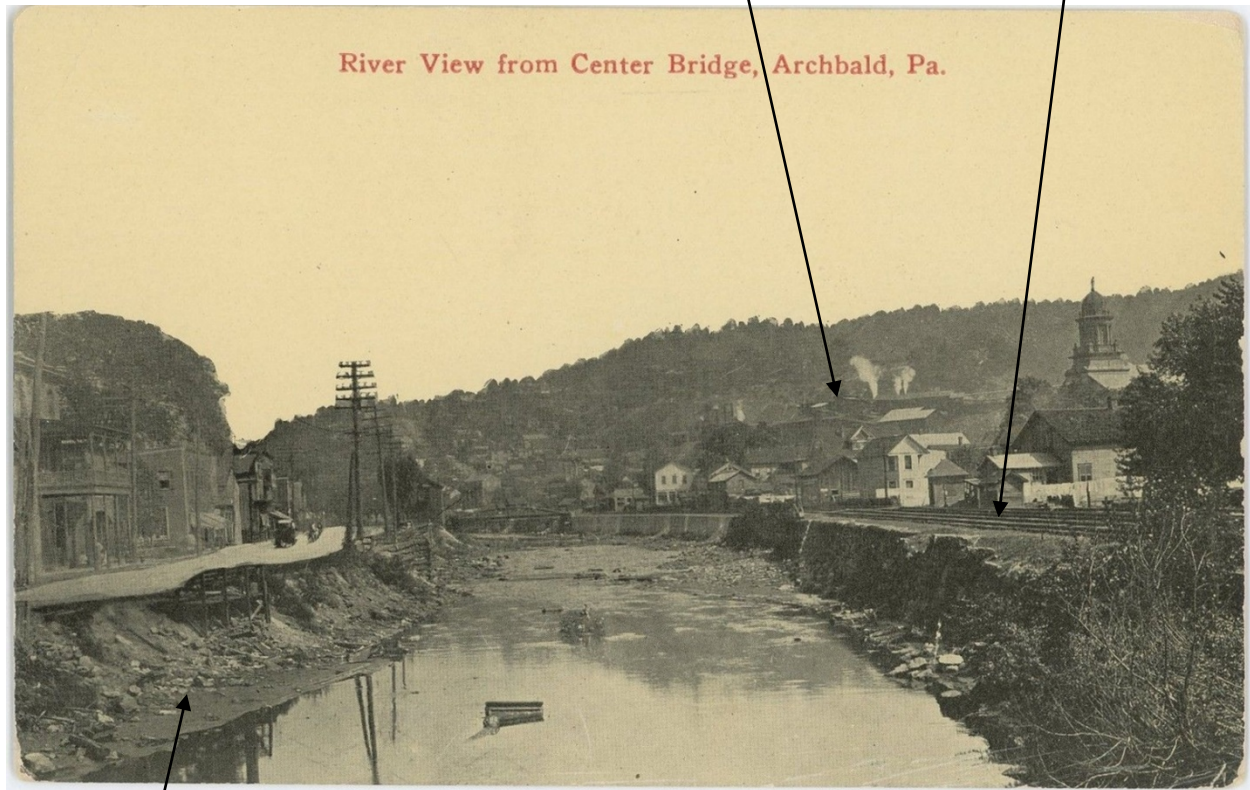
Reverse of post card shown on the preceding page:



Photo post card view of “River View from Center Bridge, Archbald, Pa.” This post card was added to the collection of the Carbondale D&H transportation Museum on May 11, 2017, courtesy of John V. Buberniak.

The Birdseye, or
possibly the White
Oak Breaker

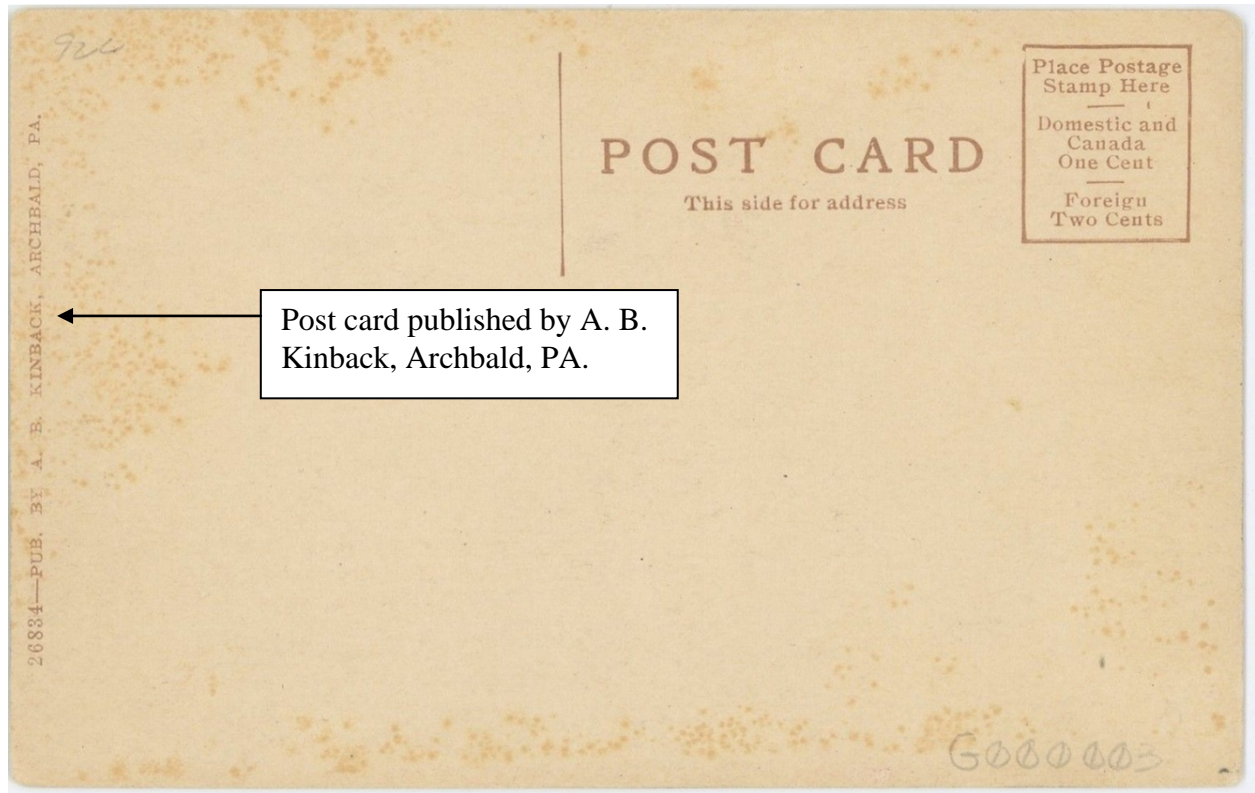
Gravity-era canal gone;
O&W tracks on canal
site. Photo 1890 or after.



River View from Center Bridge, Archbald, Pa.

Serious bank
erosion; photo
probably taken
following major
flood.

Reverse of post shown on the preceding page:

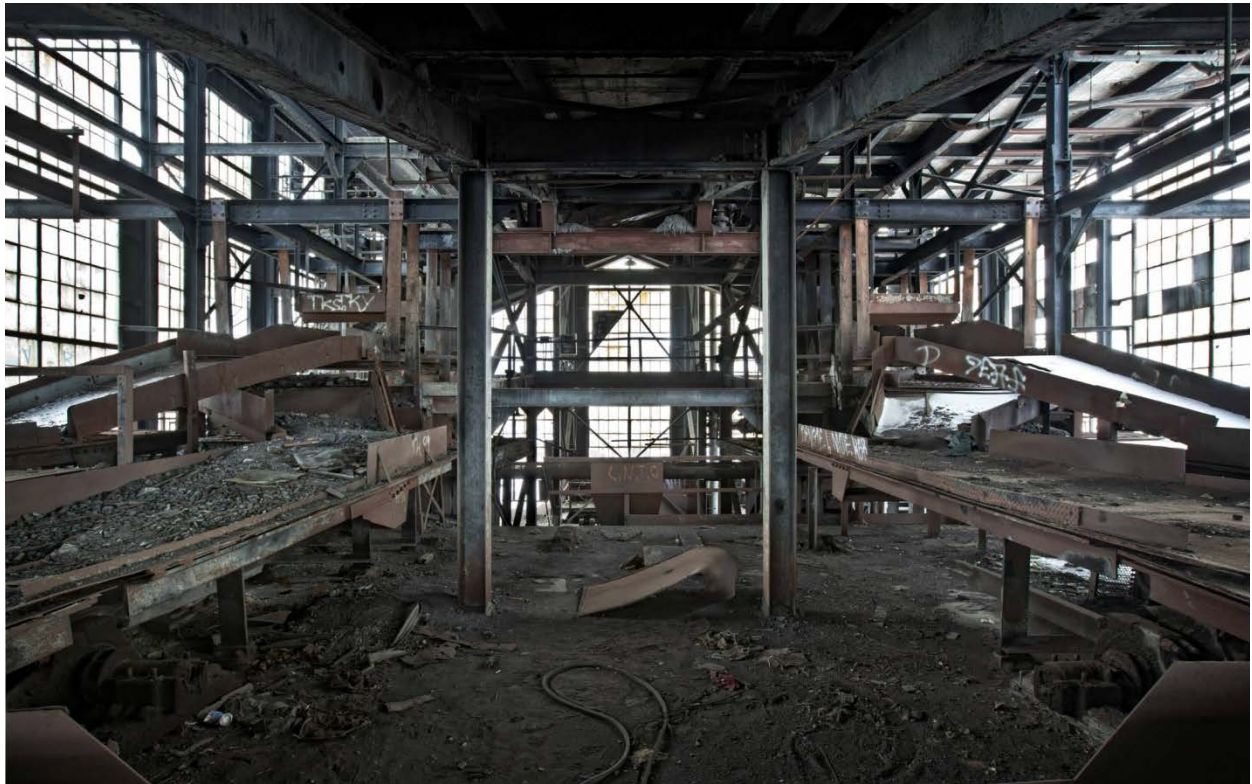


1863

Huber Breaker

This was a Glen Alden Coal Company breaker, in Ashley. It was capable of processing 21,000 tons of coal a day, and was described as “the most completely mechanized and scientific coal operation plant in the anthracite region.”

The Huber Breaker opened in February 1939 and was closed in 1976. Al Roman bought the Huber Breaker and about 21 acres of land around it for \$25,000 in 1997. Ray Clark is the chairman of the Huber Breaker Preservation Society board and a member since its incorporation in 1991. See the article titled “End in sight for region’s last coal breaker” by Elizabeth Skrapits in the June 26, 2011 issue, page A11, of *The Scranton Times*.



Huber Coal Breaker, Interior View, Ashley PA.

The Huber Breaker was demolished on April 24, 2014, and on that day, as Rick Sedlisky said in the article given on the following page, “the last remaining major physical presence that represented how and why northeast Pennsylvania played a major role in the industrialization of the United States fell to the torches.”

The article given below by Rick Sedlisky (“Huber: The End of an Era”) was published in the newsletter of the Genealogical Research Society of Northeastern Pennsylvania, Inc.

Huber: The End of an Era

by Rick Sedlisky

It stood for 75 years and in its 75th year of existence, it is no more. At 3:30pm, Thursday, April 24, 2014, unannounced, the Huber Breaker, the last remaining major physical presence that represented how and why northeast Pennsylvania played a major role in the industrialization of the United States fell to the torches.

Those who planned to record the last hours of the breaker were told that Huber would be torn down either on Friday or Saturday and were not present at the end.

A gallant, 22-year effort led by the Huber Preservation Society to preserve the breaker located in Ashley, PA, had a good amount of public support, but lacked sufficient political and financial backing to achieve what could have become a division of the property allowing some to gain financially and others to see history remain intact.

Some continue to question the court's ruling that allowed Paselo Logistics LLC to receive the entire 26 acres of property rather than to divide the acreage. Others question as to whether or not Pennsylvania Department of Environmental Protection regulations regarding asbestos removal were actually followed.

“In its heyday, the Huber employed approximately 1,700 people and produced 7,000 tons of coal per day.”

→ In its heyday, the Huber employed approximately 1,700 people and produced 7,000 tons of coal per day. Huber's coal, known as “Blue Coal” because coal was spray painted blue as an advertising gimmick, was shipped throughout the eastern United States, primarily carried by the Central Railroad of New Jersey that had a major yard located adjacent to the operation. Operations at Huber ended in 1976. ←

Not an advertising gimmick, but a procedure “to keep everybody honest,” as Jack Gillen explained to the author on November 13, 2010:

“The Glen Alden Coal Company sprayed their coal with a blue dye [when it was in the railroad cars at the breakers] and they made a name for themselves selling ‘blue coal.’ The coal companies tinted their coal to keep everybody honest. If the coal was tinted, you couldn't cheat.” Jack Gillen, November 13, 2010

In other words: If the surface of the coal in a loaded coal car was sprayed with a blue dye at the breaker, it was easy to see, after the car had left the breaker, if someone had removed a portion of the coal from that car on its way to a customer, because you could see that the blue coating on the coal on the surface of the loaded car had been tampered with.

On November 13, 2010, Jack Gillen also said: “The Hudson Coal Company/the D&H tinted their coal silver, in the railroad cars at the breakers, for the same reason, to keep everybody honest.”

Over the years, many children and adults were killed as they jumped on and off of moving coal trains in an effort to remove a few pounds of coal.

The only remaining remembrance of Huber will be the Miners' Memorial Park located near the site. For updates on the project, visit <http://huberbreaker.org> For detailed information on Huber, visit Pennsylvania's Northern Anthracite Coal Field website at www.nothernfield.info/ and click on Huber and More Info for additional information.

1864

Hudson Coal Company

Among other provisions, the Hepburn Act of 1906 forbade railroads from transporting commodities like oil and coal in which they had personal interests, except for their own use. As such, the Hudson Coal Company, a wholly-owned subsidiary of the Delaware and Hudson Canal Company came into existence.

The Hudson Coal Company was a wholly owned, independently-managed subsidiary of the D&H. The Hudson Coal Company was, in 1947, the third largest producer of anthracite coal in the United States. In 1947, they produced 5,105,408 net tons of anthracite.

In *Pervical and Kulesa* (p. 3.), we read the following about ". . . the Delaware and Hudson Coal [sic] Company (D&H) and its subsidiary, Hudson Coal. . .":

“Anti-monopoly laws like the 1906 Hepburn Act caused the anthracite railroads to form wholly-owned subsidiaries, like Hudson Coal, which engaged in mining and processing. In 1926, Hudson Coal owned six breakers and 14 mines and in that year processed 9,165,802 tons of coal. Pennsylvania's anthracite industry reached its greatest production in 1917, during World War I, with over one hundred million tons of coal mined, processed, and sent to market. By 1930, Hudson Coal was pumping 85 million tons of acidic water out of the mines every year (23 tons of water for every ton of coal extracted).”

It appears that Chester Kulesa (Director of the Anthracite Heritage Museum at the time) and Daniel K. Perry (Director of the Everhart Museum at the time and author of the introductory essay in the Percival book titled "Pennsylvania's Anthracite Industry, pp. 3-6) think that “D&HCCo” means Delaware and Hudson *Coal* Company.

John Horgan, Jr., the photographer, began his association with the D&H in 1905 and had contracts with Hudson Coal during 1915, 1916, 1917, 1920, 1921, and 1923. These Hudson Coal years are the primary focus of the photos in Kulesa's book, "John Horgan Jr. and the Delaware and Hudson Company 1905-1926". The images in Kulesa's book are from the John R. Hennemuth Collection at the Anthracite Heritage Museum. Many of the photos, 1915-1917, are staged tableaux, illustrating safe and unsafe mining practices. Horgan's images are also seen in *Century of Progress* (1923) and in *The Story of Anthracite* (1932).

James B. Williams (b. April 1859 in Pontypridd, South Wales—d. 04-09-1943 in Carbondale, PA) worked for the Hudson Coal Company for many years. For the 13 years prior to his retirement in 1928, he served as the mine inspector for all Hudson Coal Company properties. At the time of his death, he was survived by his wife, the former Mary Jenkins, and 9 children. One son, Evan B., Kingston and Newton Lake, was the superintendent of the Gravity Slope Colliery in Archbald, also superintendent of the Pine Ridge Colliery of the Hudson Coal Company; another son, Oscar, was certified as an Assistant Mine Foreman by the Pennsylvania Department of Mines, First Anthracite Inspection District, on July 12, 1913, and in the following year certified as a Mine Foreman in the same district on June 15, 1914. Oscar, who was 56 years old when he died, was born on January 16, 1890. During his working life, he served as assistant mine foreman at the Powderly Colliery and as a contractor at the Marvine Colliery, Hudson Coal Co.

There was a Hudson Coal Company periodical called *The Safety Commentator*, the February and May 1944 issue of which John Buberniak purchased in December 2010:



On November 21, 1960, the Delaware and Hudson Canal Company's wholly owned subsidiary, the Hudson Coal Company, sold its physical assets, properties, name, customer list and good will to Blue Corporation of Maine, a wholly owned subsidiary of Glen Alden Corporation, one of the major anthracite producers.

In December 1960, the Delaware and Hudson Company announced that the Hudson Coal Company, incorporated in the state of Pennsylvania, would change its name to Wyoming Valley Improvement Company.

1865

John Jermyn Collieries

Here is the biographical portrait of the legendary John Jermyn that is given in *1880* (pp. 468A-B):

“JOHN JERMYN was born in Suffolk, England, in 1827. In the spring of 1847, he sailed for America. Two days after his arrival in New York City, he was in the Lackawanna Valley, with no immediate prospect of employment or business. He got a job working for Scrantons and Platt, at the old furnace unloading coal. He next sought and secured the contract for opening the Diamond coal mines at Scranton, and was the first man to put a shovel into that important work. This work he did from 1851 to 1854. He then entered into a contract to open and develop the coal of the New York and Pennsylvania Coal Company, situated in the notch of the mountain above Providence and known as the Rockwell mines. This he did for four or five years. In 1859, he entered into a contract with Judson Clark, Esq., for the sinking of a slope and mining the coal from the lands of the said Clark, situated on the Abington turnpike and near the mines of the New York and Pennsylvania Coal Company. He did this for two years. Judson Clark died. Then, with a Mr. Clark from Carbondale and a Mr. Wells, he became the proprietor of the mines under a lease with the estate, under the firm name of Jermyn, Wells & Co. This he did for three years. Before this lease expired with the Judson Clark estate, he entered into an agreement with Judge Birdseye of New York City for the working of his mines at Archbald. He did so with great success and three years later the owner of those mines sold them to the Boston and Lackawanna Coal Company at a great profit. Next, John Jermyn entered into a contract, in 1875, with the Gibson estate for the mining of their lands two miles up the Lackawanna River, at Rushdale. This he did with great success. When the borough of Gibsonburg was incorporated in 1869, it was thought fitting that it should bear the name of the estate on which it was founded, hence the name Gibsonburg. In 1873, the name of the borough was changed to Jermyn. In 1851, John Jermyn married Susan Knight (daughter of Joseph Knight of West Scranton, born 1824; married October 19, 1851) of Cornwall, England, and they were the parents of ten children (Joseph, Willie, Frank, Myron, George, Walter, Edward, Emma, Susan, and John).”

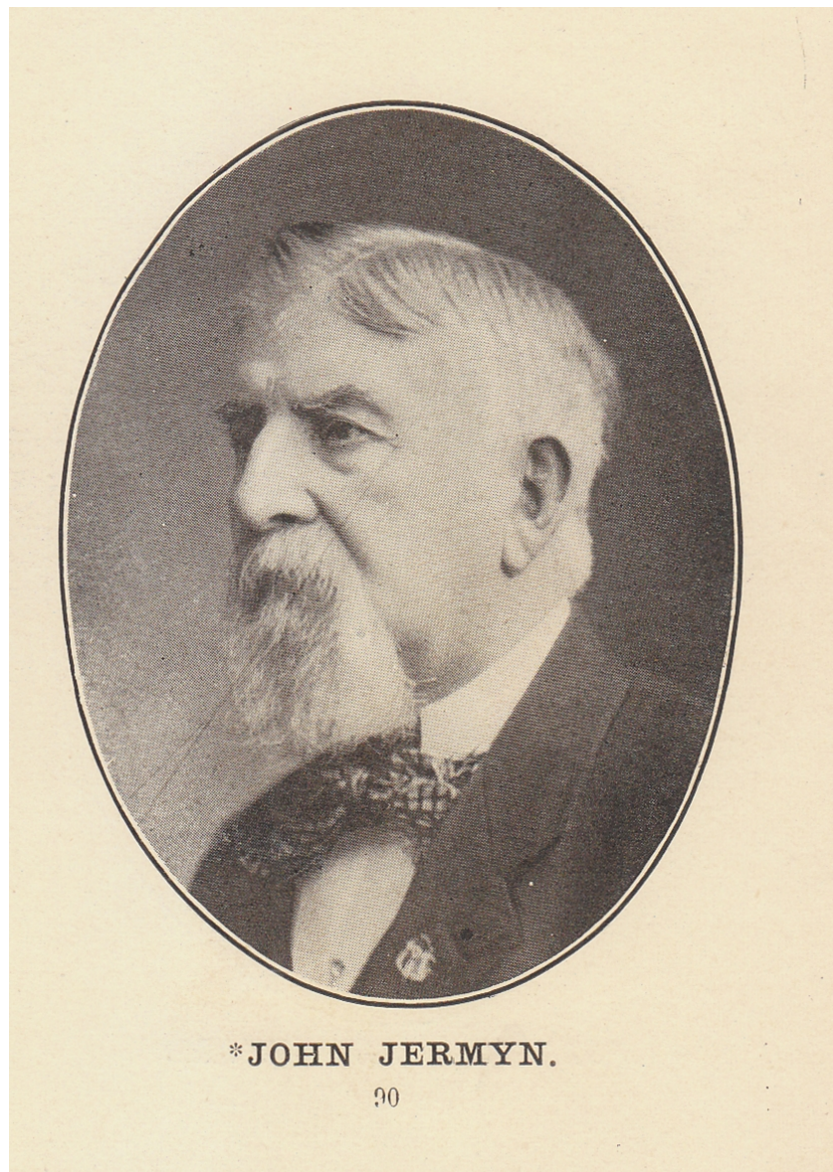
John Jermyn died on May 29, 1902. Here is a copy of the death notice that was published in *The Inquirer* (copy of clipping in one of the Gritman scrapbooks in the collection of the Carbondale Historical Society):

"DEATH SUMMONS JOHN JERMYN. / Special to *The Inquirer*: SCRANTON, Pa., May 29 [1902]--John Jermyn died here to-day aged 72 years. He was one of the prominent coal operators, a multi-millionaire, the owner of Hotel Jermyn, which was named after him, and was also the largest stockholder of the First National Bank. He had been ill eighty-seven days. / Mr. Jermyn was a native of England and came to this region without a dollar. For his first day's work in this vicinity, at the age of 23, he received 75 cents. He was thrifty, and saving up his earnings became a contractor, and in 1875 with others secured valuable coal lands at Gibsonburg, which was afterwards named after the deceased. / This coal property he developed, and securing others became in the course of years the most prominent individual coal operator in the Lackawanna region. He is survived by a widow and the following children: Joseph J., Frank J., Walter, George, Howard, Edward, Rollo, Susan and Emma Jermyn." (clipping in the Gritman scrapbook)

Here is the portrait of John Jermyn (about 50 years old; he was born in 1825 and *Clark* was published in 1875) by S. S. Hull that is given, facing page 204, in *Clark* (1875):



Here is the portrait of John Jermyn (at about age 77) that was published on page 23 of Stoddard's *Prominent Men* (1906):



The following biographical sketch of John Jermyn is given in *Stoddard*, p. vi:

"JOHN JERMYN / Born Suffolk, England, October 27, 1825—May 29, 1902. Educated London, England. Married Susan Knight, October 20, 1851. Coal operator. Director First National Bank; Miners & Mechanics' Bank, Carbondale; Consolidated Water Supply Co. Director in various other corporations."

John Jermyn was a member of Carbondale Lodge No.249, Free and Accepted Masons. Under his direction and with his strong financial support, Carbondale's splendid Masonic Hall was erected in 1875. The architect was F. J. Amsden.

Here is the photograph of the *Masonic Hall, Carbondale. Jermyn Block* from *J. A. Clark* (facing page 208):



Masonic Hall: Designed, interior and exterior, by the architect F. J. Amsden. Detailed article about the building published in the *Carbondale Advance* of Saturday, April 17, 1875 (p. 3). Copy of the article, titled "Jermyn's Block," in the archives of the Carbondale Historical Society and Museum; copy also given below:

JERMYN'S BLOCK.

A grand and imposing edifice on Dundaff street is appropriately an absorbing topic of conversation. When Mr. Jermyrn broke ground for this building, no one had the remotest idea that such a noble monument of architectural beauty would ever be erected in Carbondale. On the ground it is fifty by ninety feet. It has a fifty feet frontage and is four stories high. The stories are marked off by belt courses of light colored stone and the walls are ornamented with plain and blocked pilasters. All the windows have semi-circular heads with stone arches, the keys of which are very neat, and the side blocks are scroll curved. The whole exterior is painted and sanded in colors to suit the stones. The two store fronts are imposing, being gotten up in the best modern style with large plate glass windows and ornamental cornice. In the centre of the front is a grand entrance, six feet wide. This vestibule is covered with one large stone, the sides of the walls are neatly panelled as well as the arch overhead. Above the outside is a very pretty balcony and on each side of this block pilasters rise neatly to the cornice where they are united by an arch with stone capitals and key-stone. Below the stone belt course of the third story is the sign, "Jermyrn's Block" in raised letters. A very substantial belt and ornamental cornice runs across the front and on the one side of the building that shows to good advantage.

From the cornice rises a fine Mansard roof. In the centre of the facade a lofty square tower lifts its bold proportions, the lower point of which is finished with double pilasters and a handsome dental cornice, and is

crowned with an elaborate and profusely gilded cresting. A similar cresting in blue and gold runs around the entire roof. The dormer windows on either side of the tower and at the sides of the roof, set off the upper part of the building to excellent advantage. The double doors in the front entrance are massive and magnificent. The bronze trimmings are superb, and the graining is excellent. Over these doors is a fine circular head light, on which is designed to paint the legend "Masonic Hall." Ascending the head stairway, the second story is reached, which is finished off into two commodious dwellings, furnished with all the modern conveniences of water and gas. Turning to the right at the top of these stairs, you pass through a large door-way that leads to the second stair-way. At the top of these you notice a fine gas bracket, and turning through either the right or left hand door-way you enter a splendid suit of ante-rooms to the Masonic Hall. To your left are the rooms designed for the Blue Lodge, and those on the opposite side belong to the Commandery and Chapter. They are grained to imitate black walnut and specked maple, and all of them are carpeted and furnished in excellent taste. Over these rooms are the Commandery and Chapter room, which are to be fitted

up in superb style.

After enjoying an agreeable stroll through these rooms, you enter the hall through one of the ponderous doors; on the threshold you pause a moment to find fitting words with which to express your astonished delight, for you feel as if you were entering a magnificent Grecian temple of the purest Doric. The dimensions are sixty-five by forty-eight feet, and twenty-one feet and six inches from floor to ceiling. The walls are adorned with richly fluted Doric pilasters, over which is an elaborate entablature and richly moulded cornice. The dental course with its light and dark shades, is perfectly exquisite. The panelling of the ceiling is a model of neatness, and the four ornate centres are something new; pendant from which are four gorgeous twelve-light chandeliers.

At the east end of the hall two three-light brackets project from the pilasters. The desks are also supplied with pretty gas lights, making in all some fifty-six gas jets, which when lighted, will produce the grandest effect.

Below the bases of the pilasters are black walnut pedestals and between these, the walls are finished with black walnut and maple wainscoting, with heavy base and cap mouldings of black walnut. The window and

door casings are of black walnut and maple, and all in the Doric style. The architraves and pediments are very fine. In the centre of the pediments are bold shields with a swell panel of maple, on which 249, the number of the lodge is carved. The platforms and stages are in keeping with the rest of the work and go around the entire hall. The floor between the platforms is covered with a costly Brussels carpet, which has a wide blue border. The platforms and steps are all covered with carpet of a color to make a pleasing contrast. The settees, with their blue plush cushions, look comfortable and elegant. The Master's and Warden's chairs are *ne-plus-ultra*; they are a marvel of design and workmanship, as well as the desks, which are all made to correspond with the architecture of the room. The entire furniture is said to have cost upwards of five thousand dollars.

It is a pleasure to stand and admire the many objects of superb taste and beauty in this unsurpassed hall; truly it is a monument to the liberality and public spirit of the builder, whose name was previously associated with important improvements in our valley, and which will be remembered with grateful pleasure when he has finished his many works of usefulness among us.

F. J. Amsden
was the
architect of
Masonic Hall.

→ F. J. Amsden, the architect of this noble pile and all its interior arrangements, in so correctly carrying out the wishes of Mr. Jermy, has achieved a lasting and splendid success.

Carbondale's Masonic Hall was dedicated and opened on Thursday, April 22, 1875. See the article titled "Opening of Masonic Hall" (*Carbondale Advance*, April 24, 1875, p. 3) in the archives of the Carbondale Historical Society and Museum. Portions of that article are given below:

"Thursday of this week, April 22nd, 1875, will ever be memorable in the history of our town, as the day of the Dedication of the New Masonic Hall..."

Thomas Orchard, architect and Master Car Builder for the D&H; born in Stratton, Cornwall, England, February 27, 1820, died December 30, 1895 in Carbondale, interred in Maplewood Cemetery. Emigrated to America in 1842. Architect of the 1860 Carbondale City Hall (now part of the 1895 City Hall), and many other buildings in Carbondale. Long time member of Trinity Episcopal Church and Palestine Commandery, Knights Templar, Carbondale.

Opening of Masonic Hall.

Processions, Music, Orations,
Banquet and Ball.

A GRAND GALA DAY.

Thursday of this week, April 22nd, 1875, will ever be memorable in the history of our town, as the day of the Dedication of the New Masonic Hall. It will also be a "red letter day," a bright spot, an important era, to be looked back upon by the Masonic Fraternity with pride and pleasure. We gave last week a very full description of the imposing "Jermyn Block," in which this beautiful hall is situated, hence will now speak only of the dedication. The necessary arrangements were placed in the hands of very competent committees, and were carried out in the best manner.

THE COMMITTEES.

The committees were—

The Masonic Hall Committee: Joseph Birkett, President; C. O. Mellen, Secretary; J. B. Van Bergen, Treasurer; Thomas Orchard, J. H. Bagley, George Burrell, John Scurry, Wm. R. Baker, David Moses.

Committee of Arrangements: W. L. Yarrington, W. M.; M. Jordan, S. W.; H. B. Wilbur, J. W.; C. O. Mellen, Sec'y; John Jermyn, J. H. Bagley, Thomas Orchard, Joseph Birkett, John Scurry, George Burrell, W. R. Baker, David Moses.

Reception Committee: W. L. Yarrington, W. M.; M. Jordan, S. W.; H. B. Wilbur, J. W.; E. Y. Davis, J. H. Bagley, W. Burr, Thomas M. Lindsey.

Floor Managers: E. W. Mills, Charles Cooper, George Burrell, J. Alexander, jr., Wm. McMullen, John Scurry.

The Carbondale Masonic Hall was also known as the "Jermyn Block".

John Jermyn, not surprisingly, was a member of the Committee of Arrangements.

The neighboring Lodges represented by visiting brethren, were—

Cœur de Lion Commandery, Scranton; Dieu de Vent Commandery, Wilkes-Barre; Union Lodge, Peter Williamson Lodge and Schiller Lodge, Scranton; Hiram Lodge, Providence; Plymouth Lodge, Plymouth; Kingsbury Lodge, Olyphant; Hyde Park Lodge, Hyde Park; Aurora Lodge, Jermyn; Honesdale Lodge, Honesdale; Eastern Star Lodge, Philadelphia.

These were conducted to the old lodge room of Carbondale Lodge, at Cambrian Hall, and formed in procession in full regalia with Carbondale Lodge, the honored host, and were escorted through the principal streets of the town by Palestine Commandery of this city, conducted by Wm. R. Baker, Eminent Commander, ably assisted by E. W. Mills, Captain General, and others.

The officers of Carbondale Lodge appeared in new and very beautiful regalia on the occasion, presented by Hon. J. B. Van Bergen.

At the Hall, D. D. Grand Master Kingsbury presided, assisted by Wm. L. Yarrington, W. M. of Carbondale Lodge, and others. The Hall was well filled with a most intelligent audience, embracing not only the hundreds of the members of the order participating, but ladies and prominent citizens of the town and vicinity as invited guests.

The audience was at once called to order by Grand Master Kingsbury, and Hon. Hendrick B. Wright was introduced as the

ORATOR OF THE DAY.

[The Hon. Hendrick B. Wright's address and the congratulatory remarks of several others are not given here, but are available in the copy of this article in the holdings of the Carbondale Historical Society and Museum.]

“Unanimous and hearty vote of thanks were extended to John Jermyn, Esq., for his liberality and enterprise in erecting the Hall...”

The addresses were interspersed with excellent music by Prof. Powell, of Scranton, on an organ he furnished, and by the Mendelssohn Band, of Wilkes Barre, Herr August Shultz, Leader, Prof. E. Herring, Prompter, which added greatly to the beauty and interest of the exercises.

→ Unanimous and hearty votes of thanks were extended to John Jermyn, Esq., for his liberality and enterprise in erecting the Hall; to Hon. J. B. Van Bergen, for the beautiful and expensive officer's regalia presented: to Prof. Powell, and the Mendelssohn Band, for the music on the occasion, and to Hon. B. B. Wright, Orator of the Day for his able address.

Votes of thanks were also appropriately extended to Mrs. Marshall, Mrs. Hendrick and Mrs. Gritman for choice baskets of flowers furnished to adorn the Hall for the occasion.

The exercises closed at about half past four P. M., by singing the Doxology.

The audience then dispersed with the best of feeling, to re-assemble in the evening for the remaining festivities.

A brilliant party assembled in the Hall in the evening and enjoyed a delightful promenade concert. A more pleasing spectacle was never presented in our town, the Hall seeming to the participants to be enchanted and in a blaze of splendor and enjoyment.

The supper was prepared by G. W. Sweigart, and was the most superb one ever seen here. The tables were loaded with the choicest delicacies—and although seating 150

persons, were pretty well filled three times successively. The tables were not only well filled with luxuries, but were so beautifully decorated that the eye was also feasted and the happiness rendered complete.

After supper a portion of the assemblage repaired to Keystone Hall, where arrangement had been made for

A GRAND BALL.

This lasted until five o'clock A. M., and closed the festivities of the opening of the new Masonic Hall, most agreeably to the participants.

The weather vouchsafed was as auspicious as possible for these interesting exercises, and nothing occurred to mar, in any way, the enjoyment. It seemed to be a day of unalloyed pleasure, and as such, we trust, will be remembered by all.

Walter Avery, Jermyn Historical Society (December 3, 2014): John Jermyn had two breakers in Jermyn, and the Glenwood Breaker in Mayfield.”

Here is a photograph of John Jermyn’s Coal Breaker No. 1, Gibsonburg, that has been made available to us by Walter Avery:



John Jermyn’s Coal Breaker No. 1, Gibsonburg

Here is a photograph of John Jermyn's Coal Breaker No. 2, Gibsonburg, that has been made available to us by Walter Avery:



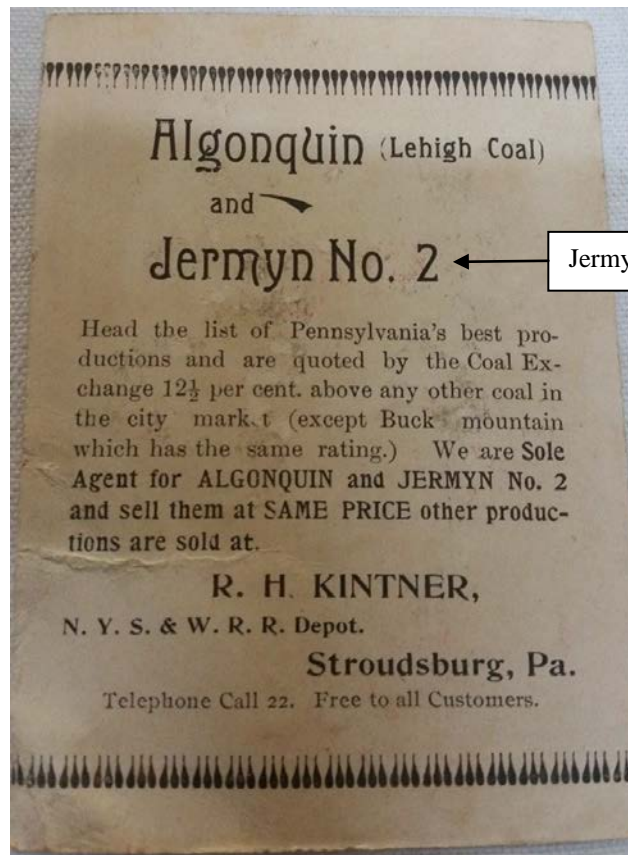
John Jermyn's Coal Breaker No. 2, Gibsonburg

The photograph shown above is a post card that was produced by the Jermyn Historical Society in 2008. See story on this post card in the March 19, 2008 issue of the *Carbondale News* (p. 16).

The coal from Jermyn No. 2 was highly regarded, as we learn from the advertizing piece, shown below, a copy of which was made available to us by John V. Buberniak on June 23, 2016:

On this advertizing piece we read: “Algonquin (Lehigh Coal) and Jermyn No. 2 Head the list of Pennsylvania’s best productions and are quoted by the Coal Exchange $12\frac{1}{2}$ per cent. above any other coal in the city market (except Buck Mountain which has the same rating. We [R. H. Kintner, Stroudsburg, PA] are Sole Agent for ALGONQUIN and JERMYN No. 2 and sell them at SAME PRICE other productions. . .”

Here are the front and back of the advertizing/sales card:



Walter Avery (December 3, 2014) said that the Glenwood Breaker in Mayfield was also a John Jermyn Colliery.

Shown below is a photo from Walter Avery of a painting of the Glenwood Breaker by Ray Bell, Jermyn.



Glenwood Breaker, Mayfield. Painting by Ray Bell, Jermyn

See herein the section on Glenwood Colliery, Mayfield.

The Glenwood Colliery was abandoned May 3, 1909, and was torn down, with the exception of the North wing, which will be used for a washery. The coal from the Glenwood mine was transported underground to the Erie shaft and hoisted to the Erie breaker, where it was prepared for market.

In addition to the three John Jermyn collieries identified by Walter Avery, there was also a **West Mountain Breaker** in Jermyn. Their mines were on Rush Brook Road, Jermyn; their office was at Olyphant. This colliery burned on April 9, 1929 (see the clipping in the Jermyn Historical Society titled "West Mountain Breaker In Jermyn Burned Today"; there are eight good photographs of the West Mountain Coal Co. in the archives at Jermyn).

From an article in the October 7, 1881 issue of the *Carbondale Leader*, we learn that it was rumored at the time that John Jermyn had sold his collieries at Green Ridge and at Jermyn to the D&H. Here is that article:

"It is rumored that Mr. John Jermyn had disposed of his collieries at Green Ridge and Jermyn to the Delaware & Hudson Canal Company." (*Carbondale Leader*, October 7, 1881, p. 4)

The rumor turned out to be true. The sale in 1881 of the John Jermyn collieries to the D&H, most interestingly, was regarded as good news by the community of Jermyn. In the December 23, 1881 issue of the *Carbondale Leader* we read:

"Jermyn has taken a new start in growth and business enterprise since the collieries there passed into the hands of the D. & H. C. Company. A monthly paper has been established; and the small stores which have hitherto languished under the shadow of John Jermyn's mammoth concern have received a wonderful stimulus. The workingmen are greatly benefited by the change in the method of operations, and will spend this year a much merrier Christmas than usual." (*Carbondale Leader*, December 23, 1881, p. 4)

Here are some reports on accidents at the John Jermyn collieries; also news items about mining activities in Jermyn:

On July 2, 1877, James Owens, a door boy in Jermyn's slope, was instantly killed by a trip of loaded cars on a self-acting plane. Here is the report on this accident in *Reports of the Inspectors of Mines of the Anthracite Coal Regions of Pennsylvania*, 1877, pp. 112-113:

"... James Owens, a door boy in Jermyn's slope, Jermyn, was instantly killed July 2d, by a trip of loaded cars on a self-acting plane. The little fellow was going to his work in the morning, and was walking up the plane upon the wrong side of the track, and when thirty yards from the foot of the plane, the loaded trip came down upon him, knocking him down, and mangling his body in the most shocking manner, and carrying it down to the foot of the plane. His head was nearly severed from his body, one arm was entirely cut off, and every bone in his body seemed to be

broken. There are so many accidents occurring on the slopes and planes in this manner, that I am forced to express the opinion that no one should be allowed to travel on them while they are working. A traveling way ought to be provided parallel with them, and this could be done in almost every case with very little trouble; but, whatever the trouble may be, a safe way should be provided for traveling.” James Owens was 13. (*Reports of the Inspectors of Mines of the Anthracite Coal Regions of Pennsylvania*, 1877, pp. 112-113).

On November 2, 1877, in a fall of roof at Jermyn’s slope in Jermyn borough, John Gurbie and Richard Klopfer were hurt. In the *Reports of the Inspectors of Mines of the Anthracite Coal Regions of Pennsylvania*, 1877, we read:

“On November 2, John Gurbie, was in a non-fatal accident (leg broken by a fall of roof) at Jermyn’s slope in Jermyn borough. In the same fall of roof on November 2, Richard Klopfer was also in a non-fatal accident (two ribs fractured and otherwise cut and bruised) at Jermyn’s slope in Jermyn borough.”

In 1878, the Jermyn Slope Colliery was operated by the Glenwood Coal Co.; the Jermyn Shaft Colliery was operated by John Jermyn.

On September 15, 1879, Michael McDermott, a 40-year old Irish miner, was killed instantly by a fall of coal and bony. The fatal accident took place because he deliberately went under a dangerous roof, even though he had repeatedly been warned of the danger of doing so by his partner, Andrew Flanigan. In the 1879 *Reports of the Inspectors of Mines*, pp. 197-98, we read the following about this accident:

“Michael McDermott, a miner at the Jermyn shaft, John Jermyn, esquire, Jermyn borough, was instantly killed September 15, by a fall of coal and bony. The chamber was worked by McDermott and Andrew Flanigan, and it was forty feet wide at the point where the accident occurred, and the fall consisted of about two tons of coal and ‘buck.’ At this point an entrance, eighteen feet wide, had been made into an old air-way, which widened the chamber to a total width of fifty feet. This was at least fourteen feet too wide, and the mine boss should not have allowed it. / McDermott had fired a blast on the Saturday evening previous, in the ‘fourteen inch’ bench of coal over the ‘buck,’ which, however, failed to bring it out. Then on Monday morning he fired a blast in the bottom coal, and this again only shattered the coal, but did not displace it. He then went to mine out this bottom coal under the ‘fourteen inch’ and ‘buck,’ that had been made loose by the blast on Saturday, and the whole mass fell on him, fracturing his skull and

killing him instantly. He had repeatedly been warned of his danger by his partner, but he answered, 'never fear, there is no danger yet awhile,' and went on mining under it, until he finally drew it down upon himself. When men deliberately go under dangerous coal or roof in this manner, and recklessly draw it down upon themselves, there is nothing that can be done, as I see, to save their lives. Michael McDermott was of Irish nationality, forty years of age, and left a widow, with four children, to mourn his loss."

From the 1887 *Reports of the Inspectors of Mines*, p. 3, we learn that many improvements were made at Jermyn No. 4 Shaft, as follows:

"*John Jermyn*—*Jermyn No. 4 Shaft* has built a new reservoir for spring water to supply the boilers. Started sinking a new slope November 5, 1887, and are down 170 feet. Slope opening , 14' x 7'" pitch, 1 foot in 3 feet. Has set three new boilers in place; one pair of engines, 10" x 10'; on fan engine, 12" x 12", and one pumping engine."

From the 1887 *Reports of the Inspectors of Mines*, p. 14, we learn that George Flasaheer was in a non-fatal accident at Jermyn Colliery No. 1 in Jermyn:

January 31, George Flasaheer, age 30, working in Jermyn No. 1 colliery, in Jermyn borough, Lackawanna County, was in a non-fatal accident (both legs broken, fall of 14-inch coal).

From the 1887 *Reports of the Inspectors of Mines*, pp. 12-13, we learn the Owen McLean, age 19, was kicked by a mule at Jermyn No. 4 colliery, Dickson City, and died the next evening:

June 11, Owen McLean, age 19, working at the Jermyn No. 4 colliery, Dickson City borough, Lackawanna County, was kicked by a mule and died the next evening.

From the 1887 *Reports of the Inspectors of Mines*, p. 13, we learn that Thomas J. Alsop, working at J. Jermyn's Jermyn No. 4 colliery in Dickson City was injured by a fall of coal and died three days later.

August 18: Thomas J. Alsop, age 40, married, with 4 children, working at J. Jermyn's Jermyn No. 4 colliery in Dickson City borough, Lackawanna County, was injured by a fall of coal and died three days later.

One of the largest pumping stations in the world is sealed in solid rock, nearly 300 feet beneath the borough of Jermyn. It was completed and placed in operation in 1933. Here are some of the many remarkable facts about this pumping station and about the anthracite mines and about anthracite mining that are reported in this article:

- At this pumping station there is a battery of eight electrically-driven, centrifugal pumps, located approximately 270 feet below the Lackawanna River into which they discharge.
- The first step in building this pumping station was the sinking of a slope 700 feet long, by 16 feet wide, and 8 feet high, through solid rock and four veins of coal, on a grade of 39 per cent. This slope is divided lengthwise by a tile and brick wall: one half; houses the 36-inch discharge pipe and electric power lines; the other a stairway and a 28-inch gage railroad track over which the machinery and pipes were lowered in cars, operated by means of an electric hoist. At the foot of the slope the solid rock was excavated to form a room 200 feet long, 22 feet wide, and 30 feet high, to house the pumps, pipes, and valves, with a wing 40 feet long, 12 feet wide, and 16 feet high, for the electric control panel and additional piping. Water from the sump enters at the top of the pump through three-36-inch pipes.
- The pumps include: four 5,000-gallon-per-minute units, each consisting of two single-stage pumps in series, driven by 500-horsepower, 2,300-volt, induction motors; and four 3,000-gallon-per-minute, three-stage pumps, powered by 300-horsepower motors of the same style. A ninth unit, rated at 1,000 gallons per minute, is used to remove water which leaks from valves, pumps, or pipes and accumulates in a sump sunk below the pipe level at the far end of the room.
- The capacity of this pumping station is conservatively rated at 48 million gallons of water per day
- The pumping station is operated 8 hours a day to bring to the surface all the water seeping into the anthracite mines in the entire area between Simpson, one-half mile north of Carbondale, and the point where the Archbald coal bed crops out at the surface half a mile below Jermyn, some 6½ miles from Simpson. All the billions of gallons of water which annually find their way into these workings are conducted through a drainage system to a great underground lake or sump, which is situated directly over the pumping station and approximately 250 feet below the ground level.
- Under normal conditions only part of the pumping equipment is required to keep the underground reservoir empty, operating from 11 P. M. until 7 A. M., when the demand for electric current for other purposes is not as great as in the daytime.
- Beginning March 13, 1936, when flood conditions on the surface caused the accumulation of over 300,000,000 gallons of water in the sump, every pump in the station was continuously operated at capacity for the first time over any considerable period. When normal operation was resumed April 6th, a total of over 1,000,000,000 gallons had been forced up and into the Lackawanna River through a single 36-inch pipe.

- For every ton of coal produced by The Hudson Coal Company, an average of 21 tons of water must be pumped to the surface so that mining operations may be carried on.
- In March 1936, the entire battery of pumps was run at capacity for 583 consecutive hours.
- Mining operations have necessitated the cutting of such a network of underground passageways that, if it were not for caves and robbed areas, it would be possible for a person to go from Forest City to a point several miles south of Wilkes-Barre without coming to the surface, or about 32 miles.
- Beneath the surface at Jermyn Colliery are seven veins of coal, each of which has been partially removed. They are linked together by mine slopes and tunnels so that water drains into the spaces in the Archbald bed from which the coal has been removed. The vein of coal is 10 feet thick, averages one mile wide, and is nearly 1½ miles long on Jermyn property.
- The overflow point of the underground workings is the Bottom Grassy Bed Manway, which is located near the O. & W. station at Jermyn. That overflow point is 9.8 feet below the entrance to the slope leading to the concealed pumping station. The pumps, therefore, cannot be flooded from any accumulation of water in the underground workings.

Here is the complete text of this remarkable article, which was published in *The Delaware and Hudson Railroad Bulletin*, June 1, 1936, pp. 92-94:

“Pumping a Billion Gallons / That’s What Jermyn Colliery Apparatus Did During March Flood / Sealed in the solid rock nearly 300 feet beneath the village of Jermyn, Pa., is one of the largest pumping stations in the world. Its capacity is conservatively rated at 48 million gallons of water per day, which is sufficient to supply the needs of two cities the size of Scranton or Albany. Normally it is operated eight hours a day to bring to the surface all the water seeping into the anthracite mines in the entire area between Simpson, one-half mile north of Carbondale, and the point where the Archbald coal bed crops out at the surface half a mile below Jermyn, some 6½ miles from Simpson. All the billions of gallons of water which annually find their way into these workings are conducted through a drainage system to a great underground lake or sump, which is situated directly over the pumping station and approximately 250 feet below the ground level. / Under normal conditions only part of the pumping equipment is required to keep the underground reservoir empty, operating from 11 P. M. until 7 A. M., when the demand for electric current for other purposes is not as great as in the daytime. However, beginning March 13 [1936], when flood conditions on the surface caused the accumulation of over 300,000,000 gallons of water in the sump, every pump in the station was continuously operated at capacity for the first time over any considerable period. When normal operation was resumed April 6th, a total of over 1,000,000,000 gallons had been forced up and into the Lackawanna River through a single 36-inch pipe. / The purchaser of anthracite little realizes that for every ton of coal

produced by The Hudson Coal Company, an average of 21 tons of water must be pumped to the surface so that mining operations may be carried on. In July 1922 the Jermyn Colliery workings were so badly flooded that it was decided to install a pumping station at that point with sufficient capacity to prevent a recurrence. The project was completed and placed in operation in 1933 and, prior to March 1936, it was seldom necessary to keep all the pumps operating continuously for 24 hours. So much water entered the workings this year, however, that the entire battery was run at capacity for 583 consecutive hours. If the station had not been built, all the underground mine openings at and in the vicinity of the Jermyn Colliery would have been filled with water. / To give a clearer picture of the problem which the company's engineers faced in 1922, it may be stated that all snow and rain water falling in the upper Lackawanna Valley is naturally drained by streams which lead into the Lackawanna River, which eventually empties into the Susquehanna at Pittston. Mining operations have necessitated the cutting of such a network of underground passageways that, if it were not for caves and robbed areas, it would be possible for a person to go from Forest City to a point several miles south of Wilkes-Barre without coming to the surface, or about 32 miles. These man-made 'burrows,' together with cave-ins, allow surface water to seep down into the lower mine workings, and unless it is pumped out again, all underground operations would be 'flooded out.' / Beneath the surface at Jermyn Colliery are seven veins of coal, each of which has been partially removed. They are linked together by mine slopes and tunnels so that water drains into the spaces in the Archbald bed from which the coal has been removed. The vein of coal is 10 feet thick, averages one mile wide, and is nearly 1½ miles long on Jermyn property. Due to the extent of voids caused by first mining it would be possible for 1,000,000,000 gallons of water to accumulate underground at Jermyn Colliery alone and more than twice that amount in the whole underground area tributary to the Jermyn sump before it ran out of the Bottom Grassy Bed Manway located near the O. & W. station at Jermyn. Because this overflow point is 9.8 feet below the entrance to the slope leading to the concealed pumping station, the pumps cannot be flooded from any accumulation of water in the underground workings. / Once this system of draining all water into one huge underground basin had been worked out, a pumping station of sufficient capacity to keep it empty under the worst flood conditions which might prevail had to be designed. The plans called for a battery of eight electrically-driven, centrifugal pumps, located approximately 270 feet below the Lackawanna River into which they were to discharge. / The first step in building it was the sinking of a slope 700 feet long, by 16 feet wide, and 8 feet high, through solid rock and four veins of coal, on a grade of 39 per cent. This slope is divided lengthwise by a tile and brick wall: one half; houses the 36-inch discharge pipe and electric power lines; the other a stairway and a 28-inch gage railroad track over which the machinery and pipes were lowered in cars, operated by means of an electric hoist. / At the foot of the slope the solid rock was excavated to form a room 200 feet long, 22 feet wide, and 30 feet high, to house the pumps, pipes, and valves, with a wing 40 feet long, 12 feet wide, and 16 feet high, for the electric control panel and additional piping. / Water from the sump enters at the top of the pump through three 36-inch pipes. The drains leading into the intake pipes are located at different levels in the Archbald bed, the highest being about 11

feet above the lowest. Normally the pumps are run until the lowest intake is covered with water. This spring, however, the water rose to a level of 50 feet above the highest intake pipe at one time, and all pumps were kept running continuously for 24 days. / The pumps include: four 5,000-gallon-per-minute units, each consisting of two single-stage pumps in series, driven by 500-horsepower, 2,300-volt, induction motors; and four 3,000-gallon-per-minute, three-stage pumps, powered by 300-horsepower motors of the same style. A ninth unit, rated at 1,000 gallons per minute, is used to remove water which leaks from valves, pumps, or pipes and accumulates in a sump sunk below the pipe level at the far end of the room. / The pump room is ventilated by a large fan, direct-driven by a 40-horsepower motor. Fresh air is sucked down into the room through the track side of the slope, passes through the pumproom, and is expelled through the pipe-line side of the slope. / All the 36-inch pipes are wood-lined and fittings lead-lined to prevent corrosion by the naturally formed sulfuric acid in the water. Smaller pipes, as well as fittings are lead-lined or of bronze construction, while the valves are also of bronze which resists the action of this chemical. The necessity for priming the pumps was eliminated by locating them below the level of the water they were to remove.”(*The Delaware and Hudson Railroad Bulletin*, June 1, 1936, pp. 92-94)

Those billions of gallons of water that were pumped out of the mines, at Jermyn, and everywhere else in the anthracite coal fields over the years were not, of course, pure and clean, and the rivers and streams into which they were pumped became sterile. In Susan Q. Stranahan’s *Susquehanna River of Dreams*, we read the following about acid mine drainage:

"In most cases, the only way to get water out of a mine is to pump it away. The problem is that once the water and air come into contact with the coal-bearing strata, a chemical reaction takes place—a process that in nature would be nothing more consequential than weathering. But mining hastens the course of nature, particularly in Pennsylvania, whose geology features a wealth of the chemical ingredients that combine to produce acids. In coal seams, pyrite, a mineral compound of iron and sulfur, combines with air and water and oxidizes to produce ferrous sulfate and sulfuric acid. As these new substances move through the mine, additional oxidizing takes place, creating ferrous iron and other acid compounds. / By the time the water leaves the mine it can be a potent mix of sulfates, acid, and iron hydroxides, plus aluminum, calcium, manganese, and ferrous iron. It is the presence of iron hydroxides in the discharge that give the receiving streams a bright orange color, and as the pace of mining along the Susquehanna increased, more and more streams took on this telltale hue. The streams themselves became sterile, for no living thing could survive the levels of acid." (*Susquehanna, River of Dreams* by Susan Q. Stranahan. The Johns Hopkins University Press, 1993, p. 153)

1866

Johnson Coal Company Breaker

German immigrants founded the village of Priceville, which was named in 1863 in honor of Eli Price. Priceville developed rapidly after 1882, when John Jermyn sank the shaft which was known as the Johnson shaft. Priceville is now known as Dickson City.

In the *Carbondale Advance* of April 8, 1882, it was announced that John Jermyn had found a fine vein of coal at Priceville. Here is that announcement:

"Priceville. / Mr. John Jermyn has found a fine vein of coal at Priceville—reported at 14 feet thickness at a depth of 450 feet, which will insure a bright future for that village." (*Carbondale Advance*, April 8, 1882, p. 3)

The breaker that the Johnson Coal Company erected at Priceburg, which became operational on January 10, 1898, was the largest in the upper anthracite regions and the largest in point of capacity. The machinery and engines therein are described in the following article from the *Carbondale Leader* of January 7, 1898:

"A MODEL BREAKER. / That Just Erected for the Johnson Coal Company. / The newest and most modern equipped coal breaker in the upper anthracite regions, and the largest in point of capacity, will be started at work on Monday by the Johnson Coal Co. at Priceburg. / One feature which strikes a practical mine man is the absence of height and space in a structure of such capacity. To prepare 3,500 tons of coal daily nothing less than a plant immense in height and area is usually conceived, but in the Johnson breaker the machinery does away with both space and the usual army of men and boys. It contains four sets of rolls and fourteen screens. The six wing screens are 34 feet by 6 in diameter, the four counter screens 21 feet long by 6 and 8 in diameter and the four centre screens 12 feet long by 6 in diameter. / The hoisting engines are two in number of the 'direct' type with cylinder 22 by 48 inches and have drums 6 feet in diameter. The two engines which run the machinery have cylinders 18 by 36 inches. For the slope hoisting, the two old engines with cylinders 26 by 48 inches are used." (*Carbondale Leader*, January 7, 1898, p. 5)

In June 1896, George D. Kingsley, one of the most energetic and progressive business men of Lackawanna County, became the superintendent of Collieries No. 1 and 2, belonging to the Johnson Copal Company, in Dickson City. In *PABRLC*, pp. 794, 96, we learn the following information about George D. Kingsley:

"GEORGE D. KINGSLEY, one of the most energetic and progressive business men of Lackawanna County, is a resident of Blakely and superintendent of Johnson's collieries in

Dickson City. He was born January 31, 1858, in the village which is still his home and is a worthy representative of a pioneer family of Pennsylvania. The Kingsleys suffered greatly by the Indian raid into the beautiful Wyoming Valley, to which they had fled from Wyalusing on account of the atrocities committed by the red men in the latter place."

In 1878, George D. Kingsley began working for the DL&W as a clerk. "In 1886 he was outside foreman at Avondale, which position he resigned in June, 1896, to accept that of superintendent of collieries No. 1 and 2 belonging to the Johnson Coal Company, and now has personal supervision of both mines, which under his management are profitably worked." (*PABRLC*, pp. 794, 96)

George Kingsley's father, S. D. Kingsley, learned the carpenter's trade in Bridgewater Township, Susquehanna, where he was raised. He worked as a contractor in the construction of breakers. About S. D. Kingsley, we read the following in his son's biographical portrait in *PABRLC*:

"In Lackawanna County he was employed as a contractor in the construction of breakers. From 1868 until 1875 he was with the Delaware, Lackawanna & Western road as master builder in the valley. . ." (*PABRLC*, pp. 794, 96)

1867

Jones & Company Breakers

To date, we have not learned where the breakers of Jones & Co. were located, but we do know that their second breaker was ready for use about mid-August, 1860. That we know from the following notice that was published in the *Carbondale Advance* of August 11, 1860:

"Jones & Co. will have their second Breaker ready for use in a few days, when they can forward a considerably increased amount." (*Carbondale Advance*, August 11, 1860, p. 2)

Jones, Simpson & Company

--Jones, Simpson & Co. were the operators of the Pierce Colliery at Winton. George Simpson was president of the Pierce Coal Company. In 1880, John Hosie was the General Manager of the Pierce Coal Company. John Hosie was born in Stirlingshire, Scotland, on June 2, 1812. He was named, in 1845, assistant superintendent, under James Archbald, of the Delaware and Hudson coal mines at Carbondale. He was trapped in the mine cave in Carbondale of January 12, 1846, and, after two days of digging with his hands, he dug his way to freedom. In 1877 he became a partner in the Pierce Coal Company at Winton.

--John H. Hosie--one of the five children of John and Julia (Beattys) Hosie, see 1880, p. 438J--was the superintendent of the Pierce Colliery.

In the mines at the Pierce Colliery, Thomas Clarke worked as a laborer for Peter Trence and Christian Whitney, miners. On January 31, 1879, Clarke was killed instantly by a fall of roof. The accident, said the mine inspector in the 1879 *Reports of the Inspectors of Mines* (pp. 182-183), "was the result of inexcusable negligence on the part of the miners in charge of the chamber, and on the part of David H. Jones, the mine boss." Here is the report on the accident in the 1879 *Report of the Inspectors of Mines*, pp. 182-183:

"Thomas Clarke, a laborer, working for Peter Trence and Christian Whitney, miners, working in the Pierce colliery, operated by Messrs. Jones, Simpson & Co., Archibald [sic] Borough, was instantly killed January 31, by a fall of roof. This accident was the result of inexcusable negligence on the part of the miners in charge of the chamber, and on the part of David H. Jones, the mine boss. The area of the fall was four hundred and eighty-three square feet, and consisted of a clod of rock three inches thick, which overlies the coal, which, at this place, was full of water seams. No attempt should ever have been made to prop this up, but the miners should have been compelled to take it down as they advanced in their excavation. Props would not hold it without having an immense number of them, while the amount of timber standing there was very far from being sufficient." (*Reports of the Inspectors of Mines*, 1879, pp. 182-83)

It was a coal miner who worked for Jones, Simpson & Co. who, in 1884, while blasting to extend a mine shaft in Archbald, shook loose much more debris than he expected. When the hole was cleaned, the company realized that it had uncovered the largest glacial pothole in the world, the Archbald Pot Hole.

Colonel C. B. Hackley, the landowner, guided tourists and geologists to the site. In 1914, Colonel Hackley's widow deeded a one-acre plot surrounding the pothole to the Lackawanna Historical Society. In 1943, the pothole and 150 acres there became the property of Lackawanna

County. In 1961 the property was deeded to the Commonwealth of Pennsylvania. The site is today managed by the Department of Conservation and Natural Resources as Archbald Pothole State Park.

1869

Keystone Breaker

In 1897, the Keystone Breaker was identified as one of five collieries that were owned by the Hillside Coal and Iron Company, as follows: Glenwood, Erie, Keystone, Forest City, and Clifford.

Here is a post view of the Keystone Breaker that is in the collection of the Carbondale Historical Society:

This is the trestling that was blown down by the violent storm on December 29, 1885: see article below

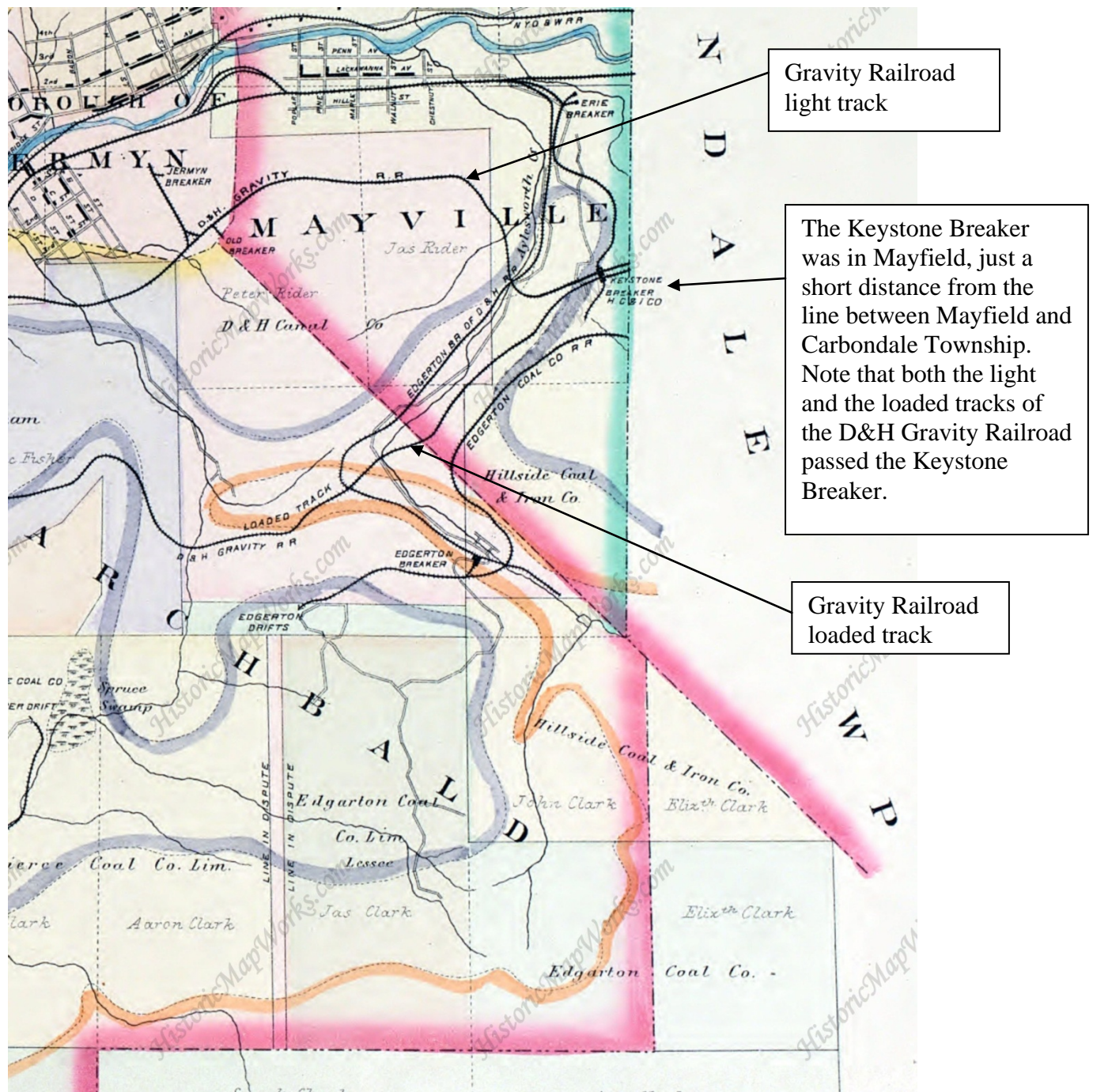


D&H
Gravity
tracks

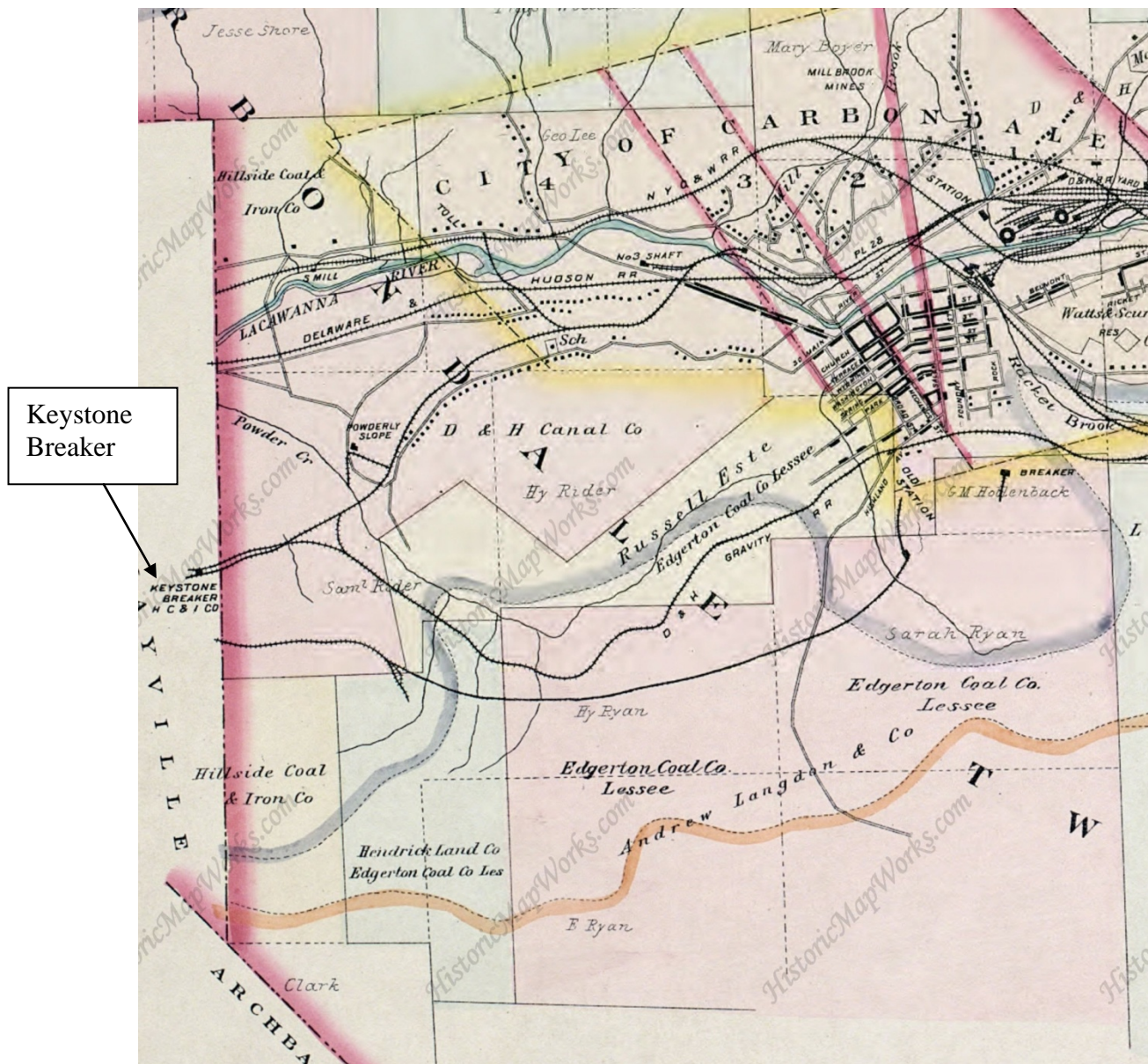
“Keystone Breaker near Carbondale, Pa.”

The exact location of the Keystone Breaker is shown on Plates 11 and 12 of the 1894 *Baist Maps of the Wyoming and Lackawanna Valleys*.

Here is a detail from Plate 11 of the 1894 *Baist Maps of the Wyoming and Lackawanna Valleys*. The exact location of the Keystone Breaker is shown on this map.



Here is a detail from Plate 12 of the 1894 *Baist Maps of the Wyoming and Lackawanna Valleys*. The exact location of the Keystone Breaker is shown on this map.



On February 18, 1887, Michael Cantwell, a young man who lived in Glenwood and who worked at the Keystone Breaker, was struck by a Gravity railroad train as he walked to work at the breaker. Here are the details on this tragic accident that were published in the February 19, 1887 issue of the *Carbondale Leader*:

“KILLED ON THE GRAVITY. / Michael Cantwell Struck by the Cars Near the Keystone Breaker Yesterday Morning. . . / Early yesterday morning, Michael Cantwell, an employe at the Keystone breaker and who lives at Glenwood, while walking to his work was struck by a gravity train. It is said that he had his hands to his ears protecting them from the cold and that he did not hear the approaching cars. His right leg was fractured in several places and horribly lacerated almost up to the trunk of the body. He was taken to his home and surgical attendance summoned, but he sank gradually until evening when he died. He was a young man and leaves a widow whom he married only a few months ago.” (*Carbondale Leader*, February 19, 1887, p. 4)

While making a charge for a blast in the Keystone mine on October 13, 1887, William Berry of Jermyn was badly injured, but “at last accounts was progressing favorably.” The details on the accident, as originally published in the *Jermyn Advocate*, were reprinted in *The Journal* of October 20, 1887, as follows:

“A sad accident occurred in the Keystone mine on Thursday afternoon. While Mr. Wm. Berry, of this place was engaged in making a charge for a blast, a spark from his lamp dropped into a keg of powder near by causing an explosion by which he was terribly burnt. His face, hands and back suffered most. When seen on Friday morning his face was swollen to such an extent around the eyes as to prevent his seeing. He suffers severely, but at last accounts was progressing favorably.—*Jermyn Advocate*.”(*The Journal*, October 20, 1887, p. 3)

In the *Carbondale Leader* of May 16, 1889, it was announced that the men who worked at the Erie, Glenwood, and Keystone collieries would be paid on May 17. In making that announcement, the *Carbondale Leader* expressed the hope that there would be no such scenes of drunkenness and disorder among those men as there was after their last pay day. Here is that article from the *Carbondale Leader*:

“Gossip from Mayville. / MAYVILLE MAY 16.—The Erie, Glenwood and Keystone Collieries will be paid to-morrow and we trust there will be no such scenes of drunkenness and disorder as there were after the last pay day. It is a shame and a disgrace to have a lot of loafers who are too lazy to work start in the saloon business and defy the law by selling Sunday as well as Monday without a license. It is time there was a halt called when a lot of drunken men will stagger out of a saloon and attend to a call of nature on the public street. Oh, for the amendment. . . “ (*Carbondale Leader*, May 16, 1889, p. 3)

On March 25, 1890, at about 8 P.M., as the Delaware and Hudson passenger train was nearing Mayville/Mayfield, T. J. McTighe, a passenger in the middle coach, was struck by what may have been a 32 caliber pistol ball that had been fired through one of the windows of the coach.

McTighe was not seriously injured. The detective employed by the D&H, it is expected, will capture the perpetrator of this villainous deed. In the *Carbondale Leader* of March 26, 1890, we find the following details on this incident:

“THROUGH THE CAR WINDOW. / A Missile Breaks a Window and Hits a Passenger. / About eight o’clock last evening as the Del. & Hud. passenger train was nearing Mayville the passengers in the middle coach were startled by a loud crash and at the same time they saw T. J. McTighe suddenly place his hand over his eye. The window on the opposite side of the coach was found to be shattered, cracked in many pieces, but still held by the strong sash, a small hole such as might be made by a 32-calibre pistol ball forming the centre from which the lines radiated. Mr. McTighe was not seriously injured, but he was stunned for a time and could not be made to understand what had happened. / It was plain from the marks on Mr. McTighe’s temple that he had been struck by a missile of some kind. A careful search failed to reveal the whereabouts of the bullet or whatever it was, and it may never be known who or what struck T. J. McTighe. The company officials will make an effort to discover who fired the missile and the clever detective employed by the Delaware & Hudson Company should be able to capture the villain.” (*Carbondale Leader*, March 26, 1890, p. 4)

On December 29, 1885, the trestling at the Keystone colliery over the D&H Gravity tracks was blown down across the Gravity tracks. It is expected that the damage will be quickly repaired. In an article titled “Silk Mill Flooded, Damage by Last Night’s Violent Rain Storm,” article dated December 30, 1895, in a scrap book at the Carbondale Historical Society, we read the following about the effects of the storm at the Keystone Breaker:

"TRESTLING BLOWN DOWN / The heavy wind caused the collapse of a trestling at Keystone colliery. It was blown down across the D. & H. Gravity track but the damage was confined to the structure. The track was soon cleared and traffic was not interfered with to any great extent."

1870

Lackawanna Breaker

The Lackawanna Breaker was operated by the Lackawanna Coal Co.

In the *Carbondale Advance* of June 29, 1867, it was announced that the new breaker being built by the Delaware and Hudson Canal Company in the D&H yard/ "half a mile above town" was said to be the largest in the Lackawanna Valley and possibly in the state. In that paper, we read:

"THE LACKAWANNA BREAKER. / The New Coal Breaker now being erected half a mile above town by the Del. & Hud. Canal Co., is said to be the largest in the valley and even in the State. We have not the particulars of its capacity and dimensions." (*Carbondale Advance*, Saturday, June 29, 1867, p. 2)

An eleven-year old boy named Thomas Linnen, who worked in the Lackawanna breaker, was killed, on his way home from work, while playing on a pile of logs, when two of them passed over him and killed him instantly. The details on this tragic accident were published in the *Carbondale Advance* of April 11, 1868, as follows:

"Fatal Accident. / Thos. Linnen, son of Edward Linnen—one of the boys employed at the Lackawanna breaker here, met with a fatal accident on Thursday afternoon of last week. He was returning home after his day's work with his companions, and passing some saw logs on the route, was playing upon them, when the logs started and got such headway as to be beyond control. Two passed over him, killing him instantly. He was about eleven years of age." (*Carbondale Advance*, April 11, 1868, p. 3)

On April 2, 1872, a violent wind storm swept through Carbondale and lifted the Lackawanna Breaker from its foundation and hurled it into the deep chasm below, fully 100 feet, carrying with it the trestle-work and the upper portion of the breaker. Four boys--Thomas Fagan, Dwight Moore, John T. Clark, W. H. Palmer—were killed. The body of Henry Jones, still alive, was taken out of the rubble, but it was not expected that he would live. Sixteen others, who were more scared than hurt, were removed from the rubble. The details on this frightening accident were reported in the *New York Times* (April 3, 1872) and a Scranton newspaper as follows:

"FATAL MINING DISASTER / THE LACKAWANNA BREAKER BLOWN DOWN AND BURNED—FIVE PERSONS KILLED AND ANOTHER NOT EXPECTED TO LIVE. / From Our Own Correspondent. / Scranton, Tuesday, April 2, 1872. / To prevent an accident in or about a coal mine is almost an impossibility. Outside is the breaker, towering to an altitude of 10 to 150 feet above the mouth of the shaft or slope. The breaker, constructed entirely of timber, becomes

in time as dry as tinder, and liable from the least cause to be consumed by fire or to be blown down by a heavy gust of wind. Inside of the mine the accumulation of gas, the fall of top coal and premature blasts make it a dangerous place for men to be employed in. Still hundreds of thousands of men and boys are found ready and willing to engage in the risky work of digging and bringing coal from the mine. Constantly the news is heralded of some unfortunate miner losing his life or being terribly injured, the last of which occurred yesterday afternoon, during the prevalence of a tornado. / The scene of the present disaster was the Lackawanna breaker, half a mile from Carbondale, and sixteen miles from this City. It is the property and worked by the Delaware and Hudson Coal Company, which road passes in close proximity to the mine. It is a slope, the cars running into the mine by a gradual descent. The breaker is situated about hundred feet from the mouth of the slope, the intervening space being spanned over by a huge trestle-work, planked over, and a narrow railway laid on top, over which the cars filled with coal were drawn and emptied into the breaker preparatory to being prepared for market. There are about twenty men and boys employed on the trestle-work and the upper portion of the breaker. It was considered safe, and was to all appearances substantially built. / A gale had been blowing in Ohio Valley since Saturday evening. Its ferocity, however, was not felt until yesterday afternoon. At that time it was a dangerous experiment to walk the streets. While the gale was at its height those who were at work at the Lackawanna breaker toiled away, not apprehensive of any imminent danger. / At 2 o'clock, while the cars were rapidly going to and fro, some filled and others empty, while a few men were getting the cars into position on the scales, so that the miner might be paid just dues, and while busy little boys, with lighted lamps on their caps, were preparing to descend into the mine, without a moment's warning a gust of wind lifted the structure completely from its foundation and hurled it into the deep chasm below, fully 100 feet, carrying with it the trestle-work and the upper portion of the breaker. There was a loud crash—so loud that the people of Carbondale heard it distinctly. When the disaster was fully realized, hundreds and thousands flocked to the locality. In the meantime the debris began to blaze, having caught from the culm pile on which it was now resting. A rickety hand engine was brought on the ground. Hundreds of willing men went to work to rescue the poor creatures who were buried underneath. Their cries were heartrending, and the scene at this moment among the friends and relatives of the unfortunate victims was indescribable. The air was filled with their groans and wailings. Only half an hour elapsed before the first victim was taken out, a little boy named HENRY PALMER, who was horribly mangled and dead. THOS. FAGAN, a boy, was next taken away, terribly burned, and his skull broken in by falling timbers. These two bodies presented a ghastly spectacle. DWIGHT MOORSE, JOHN T. CLARK, W. H. PALMER AND HENRY JONES were taken out terribly burned and crushed by timbers, but life was not extinct. The three former expired at an early hour this morning and JONES is not expected to survive until this evening. Sixteen others were taken out, but were more scared than hurt, and are today in full possession of health and strength. / E. R. W. / The New York Times New York 1872-04-03". An article on this accident ("Terrible Accidents. A Trestle-Work a Hundred Feet high Falls. Men and Boys Precipitated to the Bottom, and Buried in the Ruins") was also published in *The Morning Republican*, Tuesday, April 2, 1872.

The Lackawanna Breaker was rebuilt within the following two months. That we know from the notice that was published in the June 1, 1872 issue of the *Carbondale Advance*, in which it was announced that the D&H had ordered a suspension of work for the present at the Lackawanna Breaker. Here is that article from the *Carbondale Advance*:

“A Breaker Thrown Idle. / We regret to say that the Del. & Hud. C. Co. have ordered a suspension of work for the present at the Lackawanna Breaker here. This will throw nearly one half of our miners and many outside hands out of employment and is a very serious calamity. / One of the Olyphant shafts is also suspended. / We believe an over production of coal, and consequent low price, is the only cause.” (*Carbondale Advance*, June 1, 1872, p. 3)

In the *Carbondale Leader* of November 9, 1872, it was stated that the Lackawanna Breaker was the largest breaker in the Pennsylvania coal regions, with the capacity of preparing twelve hundred tons of coal for market daily. Here is that article from the *Carbondale Leader*:

"Lackawanna breaker, at this place, is the largest breaker in the coal regions of this State. It is competent to prepare twelve hundred tons of coal daily for market. We understand that two breakers of larger dimensions than that of the Lackawanna are soon to be erected down the valley." (*Carbondale Leader*, November 9, 1872)

Given the fact that the Jefferson Branch of the Erie was blockaded, possibly by mud slides, in April 1873, coal could not be shipped north over the Jefferson Branch. As such, coal could not be mined at the Coalbrook mines, which meant that the Lackawanna Breaker had no coal to process, which meant that the breaker had to be shut down. In the *Carbondale Leader* of April 12, 1873, we read:

“The mines at the Lackawanna breaker have been idle lately on account of the bad condition of the Jefferson Road. Coal cannot be shipped north when the Jefferson is blockaded, and consequently no coal can be mined at the Coalbrook mines until the road is running again.” (*Carbondale Leader*, April 12, 1873, p. 3)

In 1873-1874, the miners employed by the D&H refused to sign leases on the houses on D&H property in which they lived (see Volume XIII in this D&H series, Section 1316: The Lease Question: 1873-1874). That being the case, the D&H shut down operations at all of its mines and breakers, including, to be sure, the Lackawanna Breaker. In the December 20, 1873 issue of the *Carbondale Leader*, we read:

“The mines in this vicinity, owned by the D. & H. C. Co., are all idle at present, and will likely remain so for some time to come. The White Bridge Tunnel [begun in 1865] has been boarded

up at the entrance and no one is permitted to enter. The huge Lackawanna breaker—said to be the largest breaker in the world—stands grim and silent and deserted, like a dark sentinel at the entrance to the mines. No sounds of busy industry now issue from its blackened inclosure, and the giant structure which, but a short time since, prepared over a thousand tons of coal per day, is now having its winter vacation, to last—no one seems to know how long. The hundreds of willing workers would return to their labors at once, provided the question of leases could be satisfactorily settled; but the present outlook doesn't seem to favor an early resumption of mining here. The few private mines we have are all working as usual." (*Carbondale Leader*, December 20, 1873, p. 3)

In late February 1874, the Lackawanna Breaker was preparing 800 tons of coal per day, with four or five hundred men working in the mines from whence came that coal. In the *Carbondale Leader* of February 21, 1874, we read:

"About eight hundred tons of coal are prepared at the Lackawanna breaker daily. The mines from which the breaker is furnished with coal give employment to four or five hundred men and boys." (*Carbondale Leader*, February 21, 1874, p. 3)

During April, May, and June 1874, production figures for coal mined were very high throughout the entire mining region. At the Lackawanna Breaker, during May, for example, 28,000 tons of coal were prepared for market, the largest amount ever prepared there in any single month. During July and August, 1874, it was expected (1) that the mines that supplied the coal for the Lackawanna Breaker would be idle, and (2) that two-thirds of the mining population would be out of work. By September, it was anticipated, there would be a revival in the mining business throughout the Lackawanna Valley. In the *Carbondale Leader* of July 4, 1874, we read:

"The first day of July has brought a great reduction in the amount of coal mined in this vicinity as well as in the whole mining region. The number of mines from which the coal is prepared at the Lackawanna breaker have been stopped, and will undoubtedly remain idle for at least sixty days. The Lackawanna breaker has prepared an uncommonly large amount of coal within the past three months. During the month of May 28,800 tons were prepared for market at that breaker alone—the largest amount ever prepared in any single month; and for the first half of June it averaged about 1,200 tons per day, none of the coal being larger than egg size. Perhaps two-thirds of the mining population are at present out of employment; but many of the men will find work for a time among the farmers. The first of September will undoubtedly bring a revival in the mining business throughout the valley." (*Carbondale Leader*, July 4, 1874, p. 3)

By September 5, 1874, nearly all of the mines throughout the Lackawanna Valley were again in operation, with nearly 600 men and boys back at work in the Lackawanna breaker. In the

Carbondale Leader of September 5, 1874, we read:

“RESUMPTION. / Nearly all the mines throughout the valley are again in operation. Work was resumed in the numerous mines in the vicinity of the great Lackawanna breaker, on Tuesday, and we understand that a full force will be employed. The immense breaker is capable of preparing eleven or twelve hundred tons of the small sizes of coal per day, and when it is run to its fullest capacity the mines about it and the breaker gives employment to about six hundred men and boys. The industrious miners, laborers, and boys, who were thrown out of employment on the first of July, have found work or at least a portion of them have, in other places and on farms; these have now returned to their regular avocations. . . “ (*Carbondale Leader*, September 5, 1874, p. 3)

On Thursday, October 8, 1874, work was resumed in all of the mines near the Lackawanna Breaker, except in two where, it was said, the coal was of inferior quality. In the *Carbondale Leader* of October 10, 1874, we read:

"On Thursday work was resumed in the mines near the Lackawanna breaker with the exception of two. It is claimed that the coal in the two openings which are still idle is of an inferior quality, which does very well for an excuse for a suspension of work in them. It has been observed that the coal taken from almost every mine can be condemned whenever it seems necessary to have it condemned." (*Carbondale Leader*, October 10, 1874, p. 3)

On November 6, 1874, the driver boys at the Lackawanna Breaker turned out, which meant that the Lackawanna Breaker had to be shut down. The work stoppage on the part of the driver boys, in age from ten to fifteen years, was the consequence of their being told that they had to clean their mules, and rather than do that at the wages they are paid they preferred to quit work. About this work stoppage, we read the following in the *Carbondale Advance* of November 7, 1874:

"**A Turn Out.** / The driver boys of the Lackawanna Breaker turned out yesterday morning, causing an entire stoppage of the works. It is said that the boys had been notified that they must clean their mules, and rather than do this at the wages paid they preferred to quit work. These boys who have stopped this large breaker range in age from ten to fifteen years." (*Carbondale Advance*, November 7, 1874, p. 3)

In late February 1875, the Lackawanna Breaker was preparing about eleven hundred tons of coal per day:

"The Lackawanna breaker is now preparing about eleven hundred tons of coal per day." (*Carbondale Leader*, February 27, 1875, p. 3)

On August 23, 1875, Thomas Sullivan, who worked in the mines not far from the Lackawanna Breaker, was badly hurt when a portion of the roof of the mine fell upon him. When found, following the accident, it was thought that he might not live, but he made a rapid recovery. About the accident we read the following in the *Carbondale Leader* of August 218, 1875:

“Thomas Sullivan, a miner employed in the D. & H. C. Co.’s mines not far from the Lackawanna breaker, was taken from the mines on Monday afternoon in an insensible condition. He was engaged in using a drill and was in a stooping position when a portion of the roof fell upon him. When he was conveyed from the mines by his fellow-workmen it was thought that he would not live long. But his injuries proved not to be of a very dangerous character, and he is recovering rapidly. One of his ankles was sprained, and he received slight internal injuries.” (*Carbondale Leader*, August 28, 1875, p. 3)

Work at the Lackawanna Breaker and in the mines connected with the breaker was suspended in early September 1875. Prospects of full-time work there during the final three months of 1875 were not good. About these uncertain times, we read the following in the September 4, 1875 issue of the *Carbondale Leader*:

“Work was suspended at the Lackawanna breaker, on Wednesday, for how long the oldest inhabitant is unable to say. The mines connected with this large breaker have been worked quite steadily for a number of months past. Work may be again resumed in the course of a month, and it may not in three months. The miners who are regularly employed here when the mines are allowed to be worked, are in hopes that the suspension will be very brief. It is reported that the D. & H. C. Co. has concluded to mine less coal from this time to the end of the year than it has mined during the past four months. If such is the case, our laboring population may expect to take their share of idleness.” (*Carbondale Leader*, September 4, 1875, p. 3)

In March 1876, more coal was mined and prepared for market daily at the Lackawanna Breaker than at all the other D&H mines at that time. Most of that coal from the Lackawanna Breaker was sent over the Gravity road to Honesdale. In the *Carbondale Leader* of March 25, 1876, we read:

“Between eleven and twelve hundred tons of coal are daily mined and prepared for market at the Lackawanna breaker. This amount is greater than that mined at all of the other mines of the D. & H. C. Co. at the present time. Some of the coal is shipped north over the Jefferson Branch and A. & S. Railroad, but the greater portion of it is sent over the gravity road to Honesdale.” (*Carbondale Leader*, March 25, 1876, p. 3)

During the last week of July 1876, the mines at Lackawanna Breaker, the D&H Shops, the Gravity Railroad, and Van Bergen & Co.'s Foundry were in operation. The week following, however, they were idle. The times were uncertain, to be sure. In the *Carbondale Advance* of July 29, 1876, we read:

"The mines at Lackawanna Breaker, the Company's Shops, the Gravity Railroad, and Van Bergen & Co.'s Foundry, have been in operation this week, but all are to be idle again next week. This lack of work is getting to be very serious. We cannot but believe that we shall soon see the end of it." (*Carbondale Advance*, July 29, 1876, p. 3).

In the October 14, 1876 issue of the *Carbondale Leader* it was announced that the Lackawanna Breaker had been idle for a month, with no prospect of resumption in the immediate future:

"The Lackawanna breaker has now been idle a whole month, and there seems to be no prospect of its resuming work very soon." (*Carbondale Leader*, October 14, 1876, p. 3)

There were very few work days at the Lackawanna Breaker during October 1876. The miners who worked in No. 1 shaft, the tunnel, and No. 3 had more days of work. Those facts we learn from the *Carbondale Leader* of November 18, 18876, as follows:

"The miners employed at the Lackawanna breaker were paid on Tuesday. They made only five or six days' time last month, having done no work in October until the 24th. Those employed in No. 1 shaft, the tunnel, and No. 3 were paid on Wednesday. These miners made a little over twenty days last month." (*Carbondale Leader*, November 18, 1876, p. 3)

On December 26, 1876, the miners who worked at the Lackawanna Breaker mines went back to work full time, with the hope that full time work would be the order of the day throughout the winter. In the *Carbondale Leader* of December 30, 1876, we read:

"The miners employed at the Lackawanna breaker mines went to work on full time on Tuesday. This is as it should be, and as it should continue to be all winter long. There is no plain reason as anybody knows of why it should not thus continue for months to come. The men are satisfied with it, and the company can just as well keep them steadily employed as not. With the present low wages, the only way to let the men live as they deserve to live is to give them steady employment on full time. The change from one-half to three-quarter to full time has cheered the hearts of at least three or four hundred heads of families, and so long as they are permitted to work in this way, just so long will they be willing to work, and contented to do so. The number

of tons of coal which the Lackawanna breaker is capable of preparing for market daily is between one thousand and twelve hundred tons; and if the full force works on full time that amount will daily be prepared. It is encouraging to the men who work so hard for a living to end the year with the prospect of steady work; but past experience has proved that there is no certainty how long it will last. Let us hope that there will be no change soon." (*Carbondale Leader*, December 30, 1876, p. 3)

On April 2, 1877, after not having worked a single day during the month of March, the miners at the Lackawanna Breaker went back to work, half time, and produced and shipped daily 500 to 700 tons of coal. In the *Carbondale Leader* of April 7, 1877, we read:

"After a month's idleness the miners employed at the Lackawanna breaker were set to work again on Monday morning. Work was stopped at these mines on the last day of February, and not a pound of coal was broken in the big breaker during the month of March. The men are now working on half-time only, which is a considerable better than no work. From five to seven hundred tons per day are now prepared and shipped from the big breaker." (*Carbondale Leader*, April 7, 1877, p. 3)

On September 27, 1881, the right leg of William English got caught between a Gravity car and a projecting plank at the pockets, Lackawanna Breaker. He was lucky. No bones were broken. About the accident, we read the following in the *Carbondale Leader* of September 30, 1881:

"William English, son of Nate English, was seriously injured at the pockets, Lackawanna breaker, on Tuesday last. His right leg was caught between a gravity car and a projecting plank, and badly squeezed and twisted below the knee. Fortunately no bones were broken, though the escape from it was exceedingly narrow." (*Carbondale Leader*, September 30, 1881, p. 4)

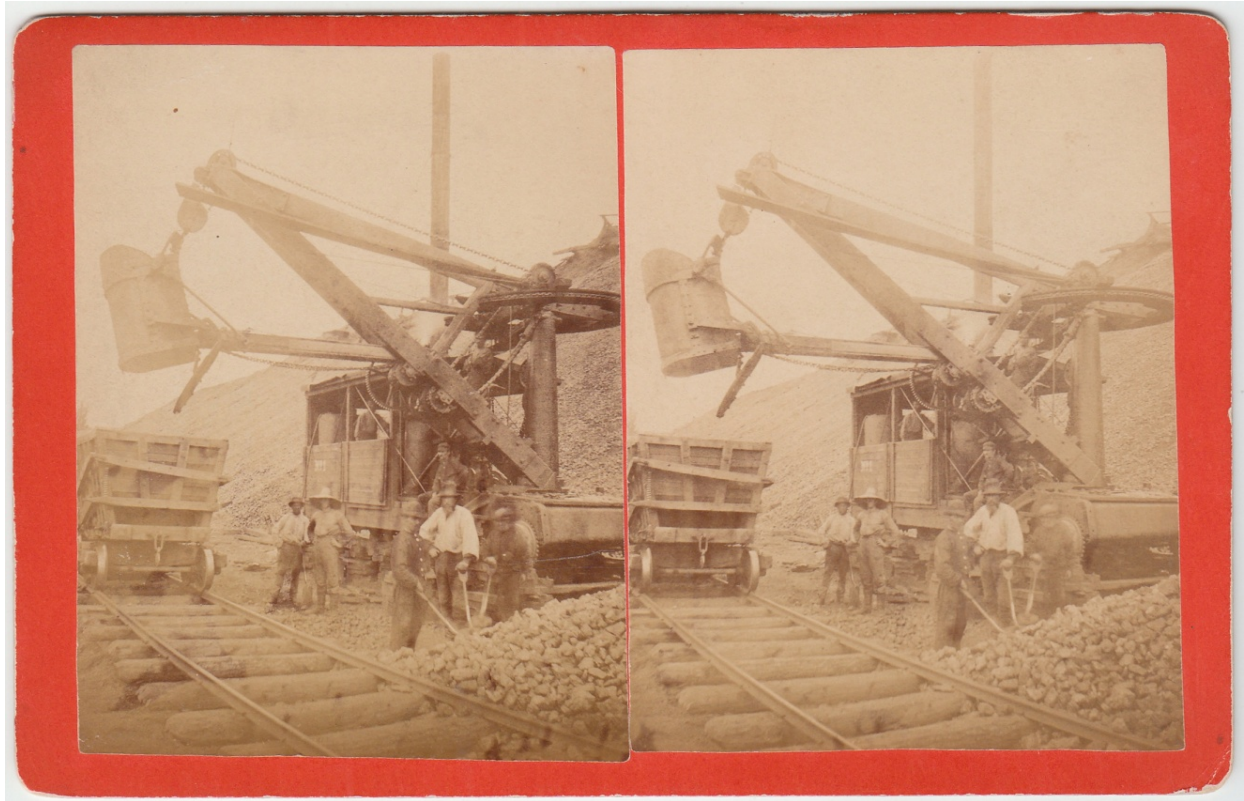
In January 1882, the culm from an immense pile near the Lackawanna breaker was being used for filling the high trestling on the Jefferson Branch near Starrucca. The new steam shovel of the D. & H. C. Co. was used to ship the culm. In the *Carbondale Leader* of January 20, 1882, we read:

"The new steam shovel of the D. & H. C. Co. is being used to ship culm for filling the high trestling on the Jefferson Branch near Starrucca. The culm is obtained from the immense pile near the Lackawanna breaker." (*Carbondale Leader*, January 20, 1882, p. 4)

A steam coal shovel was used by the D&H on the canal docks at Honesdale. Here is a photograph of that steam shovel at Honesdale that was taken by L. Hensel, Port Jervis, NY:

“Views Along The Honesdale Branch of the New York, Lake Erie & Western Railroad, Photographed and Published by L. Hensel, Port Jervis, N.Y.”

“L. Hensel, No. 977: “Steam Coal Shovel on the D. & H. Canal Docks”



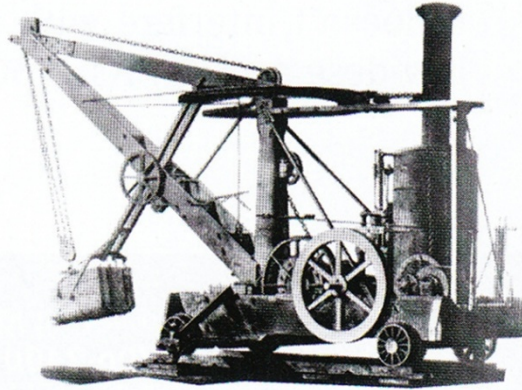
“L. Hensel, No. 977: “Steam Coal Shovel on the D. & H. Canal Docks”

Is this steam shovel on the D. & H. Canal Docks the same one that was used to load culm at the Lackawanna breaker in Carbondale in January 1882? Did the D&H have more than one steam shovel?

Whatever the case, there is a similarity between the 1841 steam shovel shown below, designed by William Otis, and the steam shovel used by the D&H on its coal docks at Honesdale, shown above.

170 YEARS AGO DIGGING IT

American inventor William Otis, 25, patents the first steam shovel on February 24, 1839. He dies later that year of typhoid. Otis, a contractor, had designed the machine in 1835 (below: an 1841 version) while building a Massachusetts railroad. A steam-powered chain hoist raises and lowers the bucket, which can also be moved from side to side. Immigrant labor keeps hand-shoveling cheap for a time, but by the 1870s steam shovels are a force behind America's westward expansion and mining operations, and, in the early 1900s, the Panama Canal. ☉



FEBRUARY 2009 SMITHSONIAN 9

(*Smithsonian magazine*, February 2009, p. 9)

A 14-year old boy, Eddie Ingeman, a slate picker at the Lackawanna breaker, was seriously hurt on Saturday, January 3, 1885, when his arm got caught in one of the shaft pulleys in the breaker and his whole arm was drawn in between the belt and the pulley. His arm was broken in two places and the flesh badly lacerated. Dr. Shields said there was some hope of saving the hand and arm. About this accident, we read the following in the *Carbondale Leader* of January 6, 1885:

“A CRUSHED ARM. / Master Eddie Ingeman, a fourteen year old son of Mrs. Ole Ingeman had his right arm badly crushed on Saturday noon. The little fellow is employed as slate picker at Lackawanna breaker, and during his noon spell on Saturday was playing in the engine room. He had seen the engineer put powdered resin on one of the shaft pulleys to prevent the belt from slipping and was imitating his example when his glove got caught by the belt, and his whole arm was drawn in between the belt and the pulley. His screams brought immediate assistance, but when the machinery was stopped it was found that his arm was broken in two places and the flesh badly lacerated. He was carried home and has since been under the care of Dr. Shields who has some hope of saving the hand and arm.” (*Carbondale Leader*, January 6, 1885, p. 3)

In July 1899, the largest coal breaker in the world, with the latest coal cleaning and separating machinery, was under construction on the 'flats' /in the Carbondale yard. In the new breaker, four thousand tons of coal will be prepared for market daily. The culm dumping ground that will be made in the upper end of the yard will be paved or flagged in order that a steam shovel may be used there. A washery will be constructed on the site of the present Coalbrook breaker through which the culm will be run before being dumped. Those improvements, among others, were a part of the remodeling of the D&H yard that was announced in the July 17, 1899 issue of the *Carbondale Leader*:

“LARGEST IN THE WORLD. / New D. & H. Breaker in Course of Construction on the Flats. / The largest coal breaker in the world will soon be among Carbondale's industries, the mammoth one now in course of construction on the 'flats' taking the place of the several smaller ones now operated in this vicinity by the Delaware and Hudson company. Four thousand tons daily will be the coal breaking and preparing capacity of the great plant and the upper railroad yard will become the center of immense traffic. The remodeling of the yards has begun and daily hundreds of men are engaged laying new tracks and moving the old ones. / The anthracite park grounds are fast assuming the appearance of another yard. Here also men are engaged getting the place in readiness. It is said in mining circles that the culm dumping ground that will be made in the upper end of the park will be paved or flagged in order that a steam shovel may be used. It is the intention of the company that nothing marketable will go to waste as it is learned from a fairly reliable source that the latest coal cleaning and separating machinery will be used in the new breaker besides the building of a washery on the site of the present 'Coalbrook breaker' through which the culm will be run before being dumped.” (*Carbondale Leader*, July 17, 1899, p. 2)

In the October 18, 1899 issue of the *Carbondale Leader*, it was announced that the new Lackawanna breaker at the north end of the Carbondale yard would contain all of the newest methods of preparing coal for market. Here is that announcement:

“A MAMMOTH ENTERPRISE. / Review of the Work Under Way by the Delaware and Hudson Company. / To fully realize the immense height of the mammoth breaker under construction by the Delaware & Hudson company on the 'flats' one should mount to the topmost floor and look to the ground below. Men of average height sink into insignificance to the eye and the whole surrounding country is spread in a most attractive panorama. / When finished it will be one great piece of machinery and will contain all of the newest methods of preparing coal for the market. In a building at the terminus of what looks to be a plane similar to the one now in use to pull the cars over to the top of Coalbrook breaker, is a building under which there is an immense hopper where coal can be dumped both from the standard gauge cars and the small mine cars. From this hopper a coal conveyor carries the lumpy material to the topmost point in the breaker which looks like a separate two story structure placed directly on top of the main building and

about half as wide. By the conveyor arrangement the pulling of the cars upon an inclined plane to the top of the breaker, the method usually employed is avoided, making a great saving of time and money, for often times a cable broke and the whole trip of cars ran to the bottom of the plane and were smashed. / It seems as though every part progresses with the other, for while the construction of the building has been going on, men have been at work changing tracks, laying foundations and building a chimney for the boiler rooms. / The coal from Wilson Creek mine was formerly taken over a trestle from the top of the culm pile into Coalbrook breaker but that with the other coal will be dumped into the immense hopper and taken into the new breaker by the conveyor. For this purpose a new track has been constructed along the hillside from a point above the culm pile and across the tracks leading from Coalbrook mine, circling in a miniature horse shoe towards the hopper building. There they are switched back toward the mule barn on a circular track that rejoins the 'horse shoe' in the straight line that leads from the old track. The grade in some places on the new track is said to be three feet in a hundred. / The immense enterprise is impressed upon one's mind fully when the coal storage plant on the site of Anthracite park is visited. Here great progress has been made by trackman Easton and his men, the seven tracks having been laid already and everything in readiness for the laying of the circular rails upon which the re-loader will work. The coal will be piled upon culm instead of cement as first intended. The coal will be piled by conveyers which will be operated by stationary steam engines. It is first dumped into hoppers similar to the one at new Coalbrook breaker except that they operate upon movable chute like arrangements which are supported by an iron trestle." (*Carbondale Leader*, October 18, 1899, p. 5)

In 1859, Charles E. Morrison began working in the mine department of the D&H as a driver between No. 2 Shaft and the Lackawanna breaker, which then (1928) stood near the site of the Coalbrook breaker. Those are some of the facts that we learn about the interesting and broad career of Charles Morrison with the D&H that is described in the biographical portrait of the man that is presented in the May 1, 1928 issue of *The Delaware and Hudson Company Bulletin*, pp. 131-32, 142. Therein, we read:

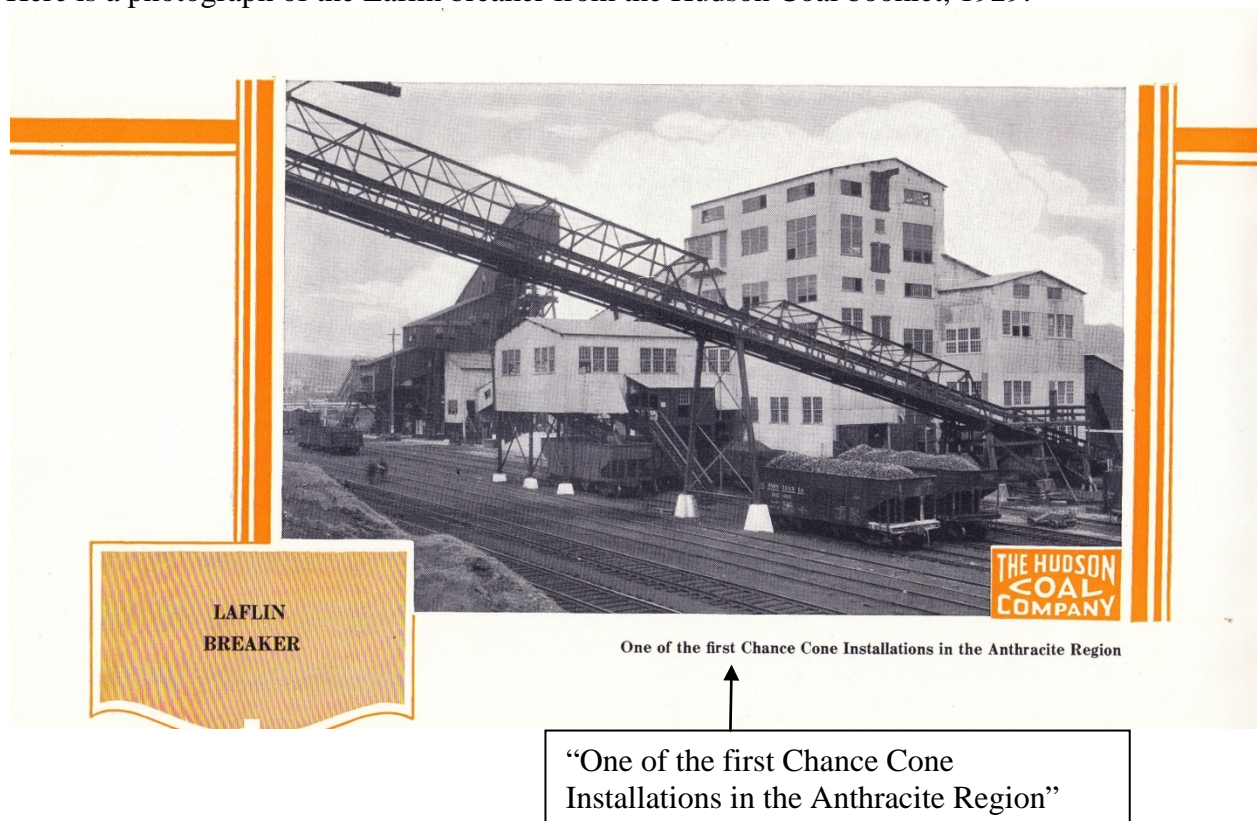
"Carbondale therefore became Charlie's birthplace [Charles E. Morrison]. The family home was in Dart Avenue when, on July 16, 1845, he was born. Until he was thirteen years old [in 1858], he attended a public school that stood in Dundaff street on a site now occupied by the Hendricks Manufacturing Company's plant. Through his father's association with the gravity road, he became acquainted with C. P. Wurts, then superintendent, and it was from him that he obtained his first position which was that of carrying water for the men who were replacing the strap rail between Carbondale and Archbald with what he calls 'T' iron. That was in 1858. A year later [1859] he was transferred to the Mine department and became a driver between No. 2 shaft and the Lackawanna breaker which then stood near the site of the present [1928] Coalbrook breaker.

Another change brought him back to the railroad, also as a driver. He continued at this work, between what was known as Davis' [Plane No. 28] and the Lackawanna breaker, a distance of about a half-mile, until 1861." (p. 132) ("He's Always Been with Us," *The Delaware and Hudson Company Bulletin*, May 1, 1928, biographical portrait of Charles E. Morrison, pp. 131-132, 142)

1871

Laflin Breaker

Here is a photograph of the Laflin breaker from the Hudson Coal booklet, 1929:



1872

Laurel Run Colliery

The Laurel Run Colliery was a D&H colliery, located in Parsons borough, Luzerne County in the Second Anthracite District; Superintendent A. H. Vandling; Assistant Superintendent, C. H. Scharer.

The Laurel Run Colliery is listed in:

The Anthracite Coal Fields of Pennsylvania with their Outlets to Market by Geo. B. Strauch and A. B. Cochran, Mining Engineers, Pottsville, PA, 1878:

Under the heading “LEHIGH AND THIRD, NORTHERN OR LUZERNE COAL FIELDS, Third or Luzerne Coal Field. Western or Wilkesbarre District,” the following Delaware and Hudson C. Co. collieries are listed: Mill Creek, Pine Ridge, Laurel Run, Baltimore No. 1, Baltimore No. 3, No. 2 Plymouth, No. 3 Plymouth, No. 4 Plymouth, No. 5 Plymouth.

From the *Report of Inspector of Mines*, 1887, p. 38, we learn that on September 19, Patrick Mayock, a miner, age 45, married with five children, was killed by a fall of coal at the Laurel Run Slope.

1873

Leggett's Creek Breaker

The Leggett's Creek Colliery was a D&H colliery in Providence.

The first train of coal was brought out of Leggett's Creek Breaker on Wednesday, September 6, 1866, and was made up of five cars. This D&H breaker was still active in 1898.

Here is the Delaware and Hudson Canal Company section (p. 165) of Table No. 7 of the *1877 Mine Inspectors Reports*, in which precise data are reported on the collieries owned and operated by the D&H at that time.

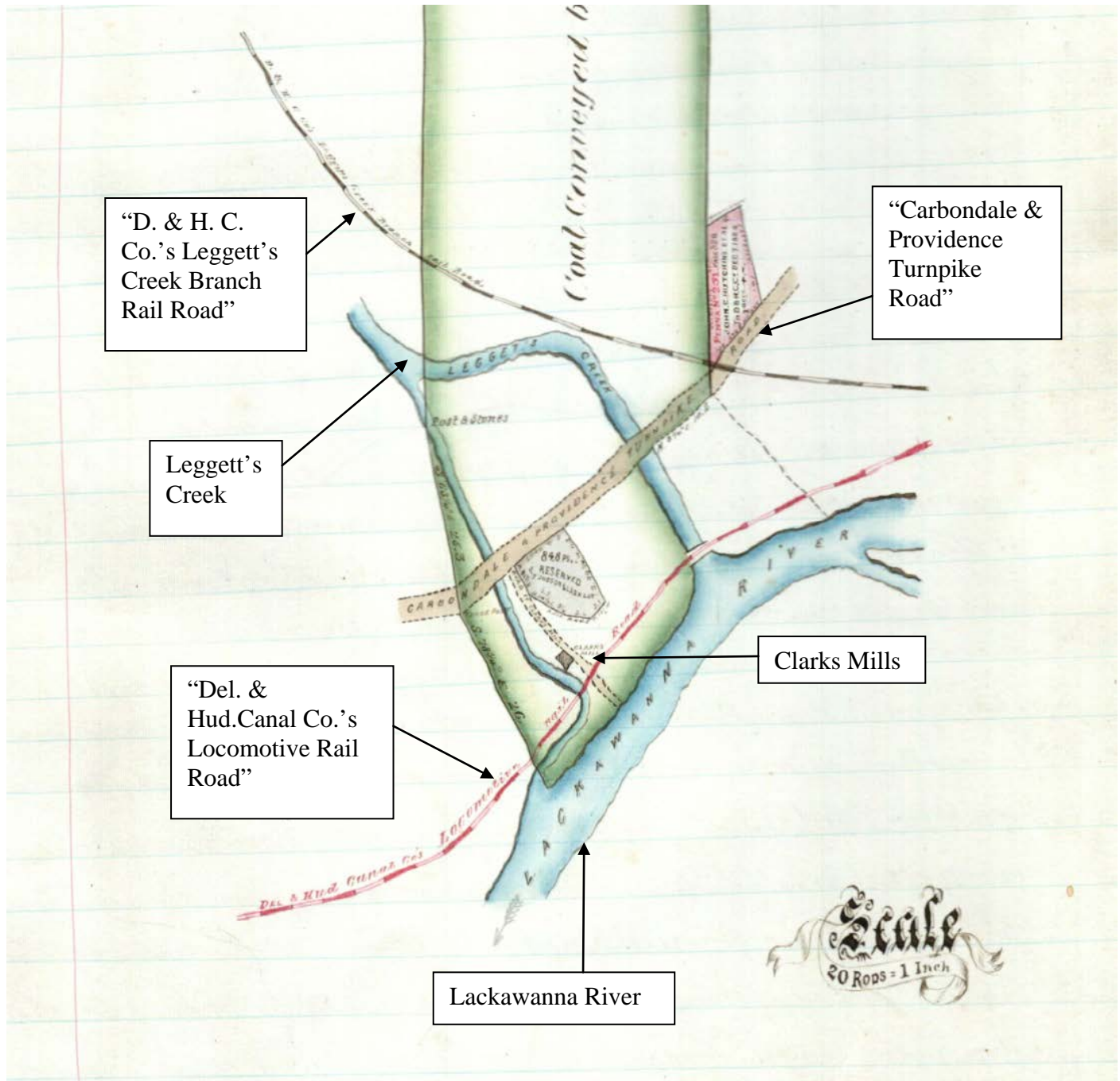
Delaware and Hudson Canal Company

NAME OF COLLIERY.	SHAFTS.					SURFACE SLOPES.				UNDERGROUND SLOPES.				Total depth of mines in feet.	ELEVATION.		TOTAL OPEN'GS.			Number of coal breakers.
	Number of.	Length in feet.	Width in feet.	Depth in feet.	Elevation of head ab. tide-water, in feet.	Number of.	Length in feet.	Vertical depth in feet.	Elevation of head ab. tide-water, in feet.	Number of.	Length in feet.	Vertical depth in feet.	Elevation of head ab. tide-water, in feet.		Of bottom above tide-water, in feet.	Of bottom below tide-water, in feet.	Shafts.	Slopes.	Drifts and tunnels.	
Von Storch slope,	2	30	10	540	1,177	1	225	..	..	1	350	..	..	540	560	..	2	1	..	1
Leggett's Creek shaft,	2	24	10	340	789	..	..	..	..	1	300	15	449	355	434	..	2	..	..	1
Marvine shaft,	1	44	10	330	742	..	..	..	..	..	..	..	..	330	412	..	1	..	..	1
Eddy Creek shaft,	2	27	10	408	782	..	..	..	..	1	450	..	..	408	377	..	2	..	..	1
..	23	10	386	785	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
No. 1 and No. 2 colliery, Olyphant,* . . . . .	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	1
Grassy Island shaft,	2	14	10	170	879	..	..	..	..	2	500	16	633	291	617	..	2	..	..	1
..	24	10	275	908	..	..	..	..	..	..	300	..	..	..	..	..	..	..	..	..
White Oak colliery,	2	8D	7	90	1,022	..	..	..	..	1	1,050	..	..	90	1,022	..	2	..	1	1
..	7	..	..	30	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Powderly colliery,* . . . . .	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
No. 1 shaft and W. B. tunnel,	1	11	11	89	998	1	450	65	998	..	..	..	..	80	900	..	1	1	1	1
No. 3 shaft,	2	24	9	70	1,022	..	..	..	..	..	..	..	..	70	952	..	2	..	..	1
..	10	10	30	1,073	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
..	8	8	25	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Coal Brook colliery,	3	10	7	50	1,200	..	..	..	..	2	275	..	..	..	..	..	3	..	5	1
..	8	8	40	..	..	..	..	..	..	..	400	..	..	50	1,150	..	..	..	..	..
Totals,	17	..	..	..	..	2	..	..	..	8	..	..	..	..	..	..	17	2	9	10

On October 2, 1879, James Moran, a slate picker, age 11, at the Leggett's Creek shaft breaker, Delaware and Hudson Canal Company, Providence, was run over and killed by a culm car. The details on this accident are presented in the 1879 *Reports of the Inspectors of Mines*, p. 217, as follows:

"James Moran, a slate picker, eleven years of age, at the Leggett's Creek shaft breaker, Delaware and Hudson Canal Company, Providence, was killed, October 2, by being run over by a culm car. The paymaster was at the colliery, and the boy was on his way to the office to draw his wages; but instead of taking the way provided for travel out of the breaker, he took an unusual way, over which he had no business to go, and which led him cross the foot of the culm plane. At this point there was a ladder to descend from a wall to the level of the culm track, between the breaker and a small building called a 'friction room,' the latter, therefore, standing between the ladder spoken of and the culm plane, so that a car descending the plane cannot be seen. The boy was just emerging from behind this 'friction room' and was hurrying over the track, when a culm car coming down the plane knocked him down and dragged him some distance, the wheels finally passing over him at the loins, tearing the flesh in a shocking manner. He died in about forty minutes. He was the son of a widow, his father having been killed in the mines a few years before."

In the *D. & H. Deed Book – Luzerne 2*, on page 437, there is a map that illustrates the deed, pp. 434-36, dated June 21, 1865, between David Belden and wife and The Northern Coal & Iron Company. On that map, Clark's Mills, the D. & H. Rail Road in the Providence area, the D. & H. C. Co.'s Leggett's Creek Branch, and the Carbondale and Providence Turnpike are shown. Here is that map:



1874

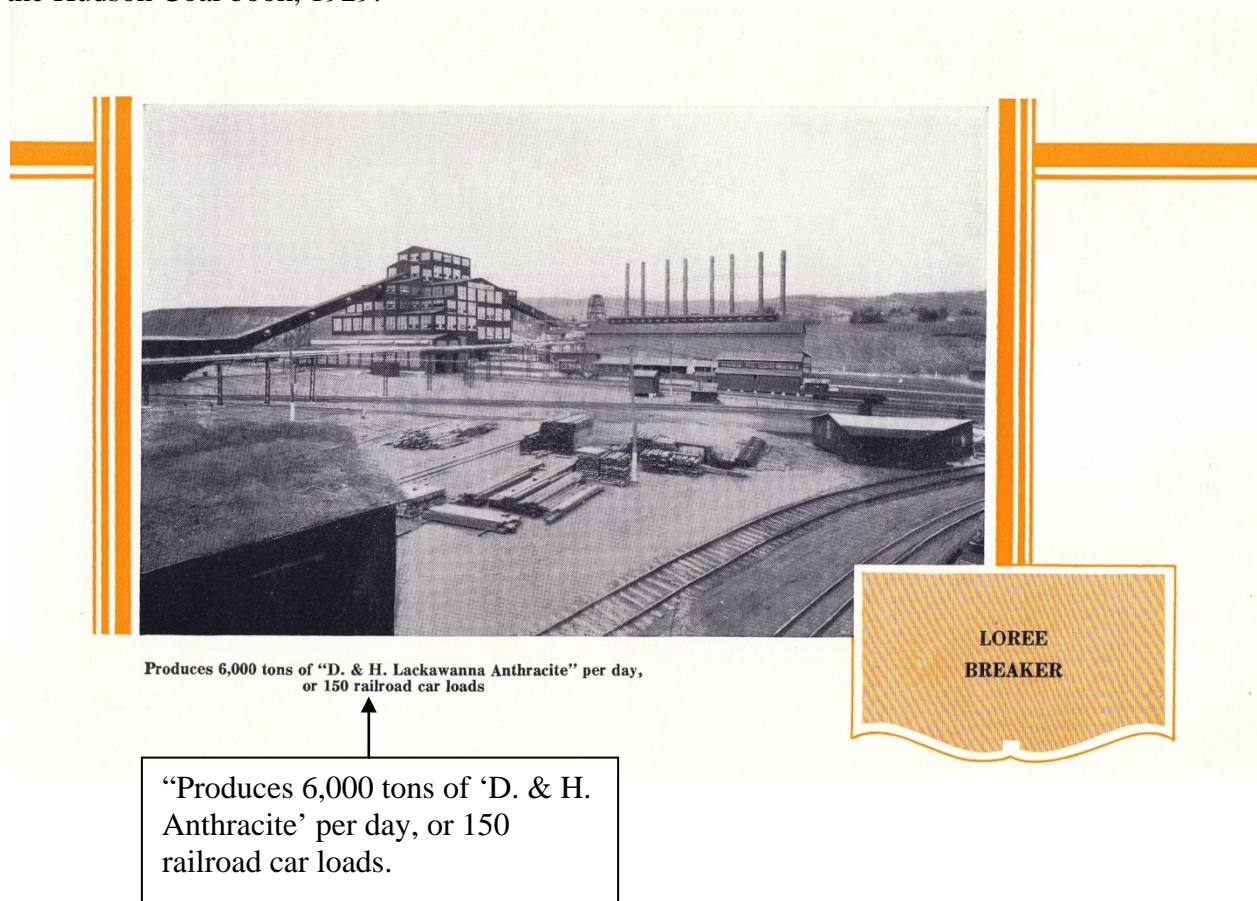
Loree Breaker

On January 22, 1919, Plymouth Breaker No. 5, built of wood, caught fire and was destroyed.

A new breaker was built on the same site. The new breaker opened in June 1919. About this new breaker we read the following in *Shaughnessy*:

"In June, 1919, 131 days after an old wooden breaker burned to the ground on the same site, the ultra-modern, all-steel Loree Breaker was completed and put into operation. It could process 6,000 tons of anthracite a day and during 1921 it prepared 1,502,180 long tons for market, a world's record for a single plant." (*Shaughnessy*, p. 298)

Here is a photograph of the Loree Breaker that opened in June 1919. This photograph is given in the Hudson Coal book, 1929:



The branch line that served the Loree Breaker had heavy and daily use, keeping the breaker supplied with empty coal hoppers and removing the loaded cars by mine run crews out of Wilkes-Barre. In 1958-1959, Mine Run No. 1 was marked at 8:45 A.M. and Run No. 2 at 4:15 P.M., both called at Wilkes-Barre with 6-man crews. In addition to these two mine run crews, the Loree Breaker had a very small steam engine that did some switching within the breaker yard. It burned anthracite coal and had no tender; the men would stop every so often and shovel some coal on the ground into the firebox, and go back to work.

1875

Manville Breaker

The Manville Breaker was located on Glen Street, in the vicinity of the Albright Avenue Bridge.

At the time of the flood of the Lackawanna River in December 1907, eight hundred men and boys worked in the Manville Breaker.

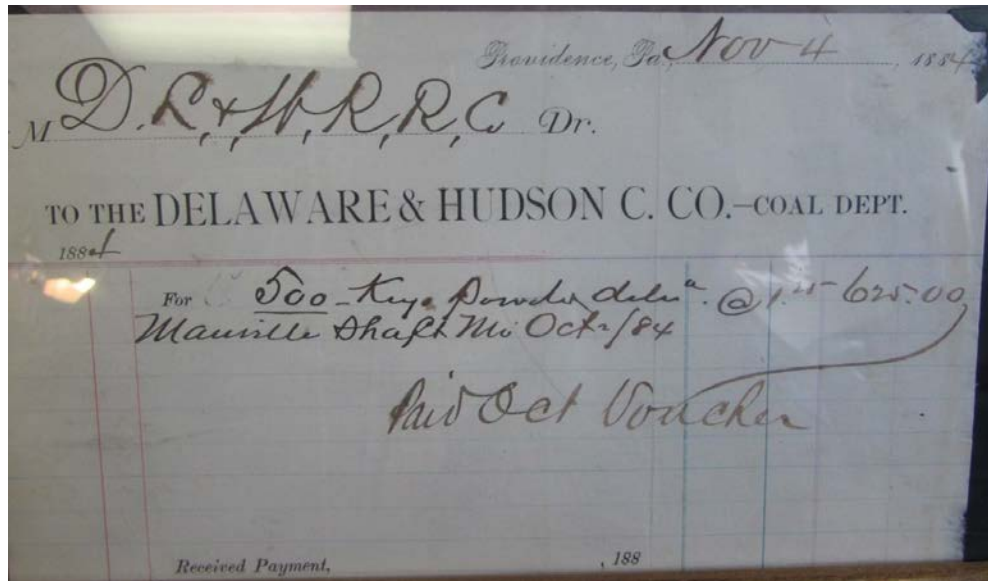
In Nicholas E. Petula's *Pioneer Neighborhood*. . . , 1998, pp. 118-119, the following information is given on the Manville Breaker:

“The Manville is another breaker that does not technically fall within our neighborhood boundaries but is so near and employed so many people from the neighborhood that it is included. John Jermyn, a tireless developer of mines throughout the region, was an established coal croaker when he acquired property on the east side of the Lackawanna River. (An area now partially occupied by Laminations Plastics and the Scranton Building Block.) In January, 1876, he opened a shaft at this site which was called the Jermyn #3. A breaker was built and successfully operated until 1881 when the D. L. & W. and D. & H. jointly purchased the concern. Under a rather unusual arrangement the two rival companies worked the mines in alternate months. In 1919 the D. L. & W. sold their interest to the D. & H. In 1921 the breaker was abandoned and coal mined at the Manville was shipped to the Marvine for processing. The Manville usually produced about 590 tons a month. In 1887 over 110,000 tons was taken from the Manville. About 500 men were employed in and around the mines in 1910. In 1933 the mine was closed.” (Nicholas E. Petula. *Pioneer Neighborhood*. . . , 1998, pp. 118-119; photograph of Manville Breaker in 1905 given on page 131 of Petula)

In August 1892, J. M. Chittenden, who assisted A. H. Vandling in the management of the mine department of the Delaware and Hudson Company for many years, retired due to ill health. Jere L. Atherton, who for many years served as the superintendent of the Manville Colliery, was appointed to fill the position made vacant by the retirement of J. M. Chittenden. These personnel changes were announced in the August 6, 1892 issue of the *Carbondale Leader*:

“AT THE D. & H. OFFICE. / Changes Wrought by Mr. Chittenden’s Resignation. / Several changes in the mine and general department of the Delaware & Hudson company have taken place within the past few days. J. M. Chittenden, who has for many years ably assisted A. H. Vandling in the management of the mine department of the company, has been obliged to retire from active work on account of continued ill health, and Jere L. Atherton, who has long been superintendent of the Manville colliery, has been appointed to the position made vacant by Mr. Chittenden’s retirement. . . (*Carbondale Leader*, August 6, 1892, p. 2)

Shown below is an invoice that was brought to our attention on July 24, 2016 by John V. Buberniak. This is an invoice from the DL&W to the D&H, dated November 4, 1884, for 500 kegs of powder, @ \$1.25 per keg, that were delivered by the DL&W to the D&H Manville Shaft in the month of October 1884; cost \$625, which the D&H paid.



1876

Marvine Breaker

The Marvine Breaker was located on North Main Avenue in Scranton. It was built of steel and had a capacity of 5,000 tons a day (1,000 tons less than the Loree Breaker).

From *Petula*, p. 120, we learn the following information about the Marvine Breaker:

"The Marvine, located in upper North Scranton, is mentioned [in the *Petula* book] because it also was a major source of employment for neighborhood men and boys. The D. & H. opened the mine in May, 1872, and built a breaker in 1875. Work began on a second breaker in 1920 and was completed at a cost of \$2.5 million. The original breaker closed in 1930. Work continued at the new site, located off Boulevard Avenue for a number of years after. The mine at this site ceased operations on October 25, 1954, although the breaker still processed coal from other mines. In 1973 the entire complex was closed and demolished." (*Petula*, p. 120)

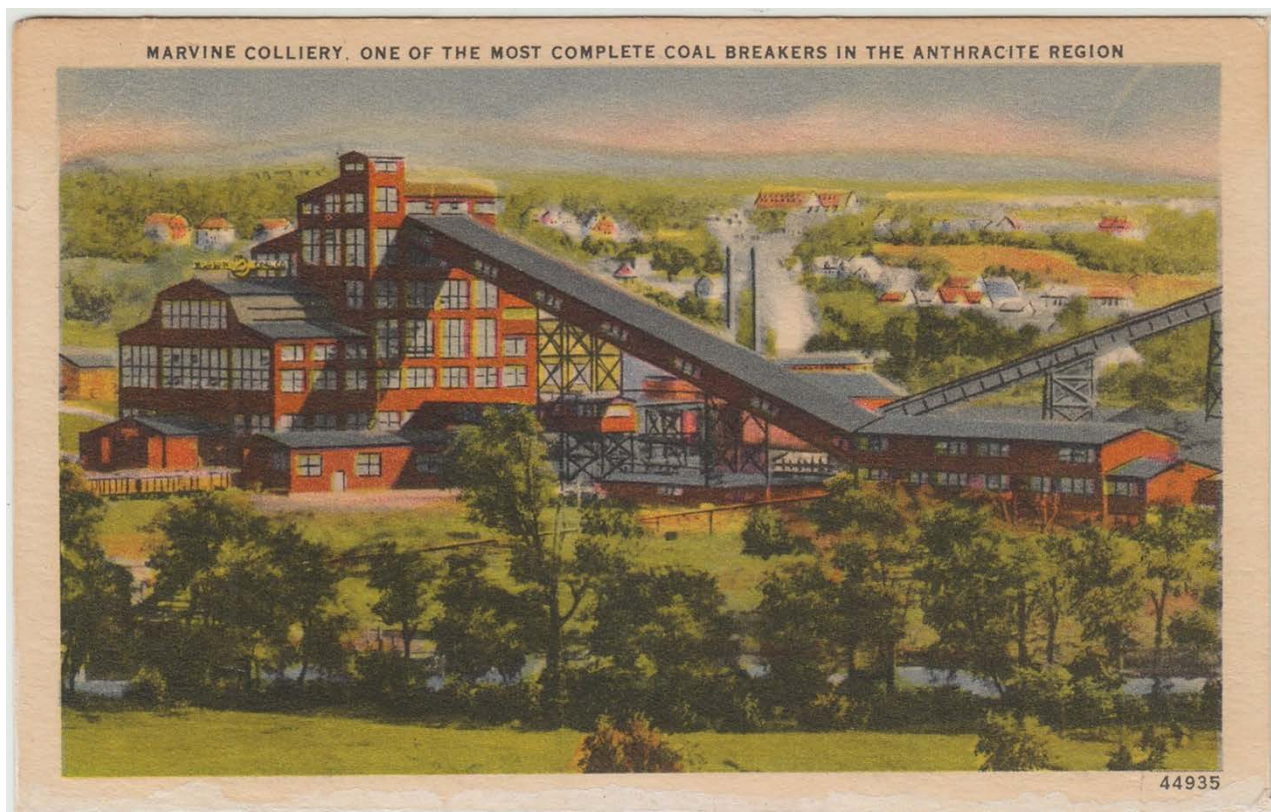
Here is the Delaware and Hudson Canal Company section (p. 165) of Table No. 7 of the *1877 Mine Inspectors Reports*, in which precise data are reported on the collieries owned and operated by the D&H at that time.

Delaware and Hudson Canal Company

NAME OF COLLIERY.	SHAFTS.					SURFACE SLOPES.				UNDERGROUND SLOPES.				Total depth of mines in feet.	ELEVATION.		TOTAL OPEN'GS.			
	Number of.	Length in feet.	Width in feet.	Depth in feet.	Elevation of head ab. tide-water, in feet.	Number of.	Length in feet.	Vertical depth in feet.	Elevation of head ab. tide-water, in feet.	Number of.	Length in feet.	Vertical depth in feet.	Elevation of head ab. tide-water, in feet.		Of bottom above tide-water, in feet.	Of bottom below tide-water, in feet.	Shafts.	Slopes.	Drifts and tunnels.	Number of coal breakers.
Von Storch slope,	2	30	10	540	1,177	1	225			1	350			540	560		2	1		1
Leggett's Creek shaft,	2	24	10	250	789					1	300	15	449	355	434		2			1
Marvine shaft,	1	44	10	340	742									330	412		1			1
Eddy Creek shaft,	2	27	10	408	782					1	450			408	377		2			1
No. 1 and No. 2 colliery, Olyphant,*	2	23	10	386	785														2	1
Grassy Island shaft,	2	14	10	170	879					2	500	16	633	291	617		2			1
White Oak colliery,	2	24	10	275	908					1	300									1
Powderly colliery,*	2	7	7	30	1,022						1,050			90	1,022		2		1	1
No. 1 shaft and W. B. tunnel,	1	11	11	89	998	1	450	65	998					80	900		1	1	1	1
No. 3 shaft,	2	24	9	70	1,022									70	952		2			1
Coal Brook colliery,	3	10	8	25	1,073															1
		8	7	50	1,200						275									
		8	8	40						2	400			50	1,150		3		5	1
Totals,	17					2				8							17	2	9	10

The Marvine Breaker was a Hudson Coal Company breaker and was served by mine run crews from Carbondale. The four-track system extending south from Carbondale had two outside tracks designated primarily for use by the mine run crews. The two middle tracks were for through freight use. The Marvine Breaker was served by mine run crews from Carbondale. Crew No. 1 marked at 5:30 A.M.; the No. 6 crew marked at 9:30 A.M., and No. 2 marked at 2:30 P.M.; all had 6-man crews.

Here is a post card photograph of the Marvine Colliery, described at the top of the post card as “one of the most complete coal breakers in the anthracite region.” Post card in the collection of the Carbondale Historical Society and Museum.



Marvine Colliery

The Marvine Colliery at its peak provided jobs for more than 1,400. Its history was marked by two major disasters, one on September 13, 1886, when eight men were suffocated by gas, and one on September 12, 1911, when five miners died.

At the time of the 1886 Marvine disaster, the D&H Managers, on August 25, appropriated \$6,000 for the relief of the families of the sufferers.

Shown below is a photograph of what may be a group of former employees at the Marvine Colliery.

Written in white ink at the bottom of this photograph, at the far left, is "Marvine H. C. Co. NO"; written in white ink on the bottom right side of this photograph is "Group of Old Employes"

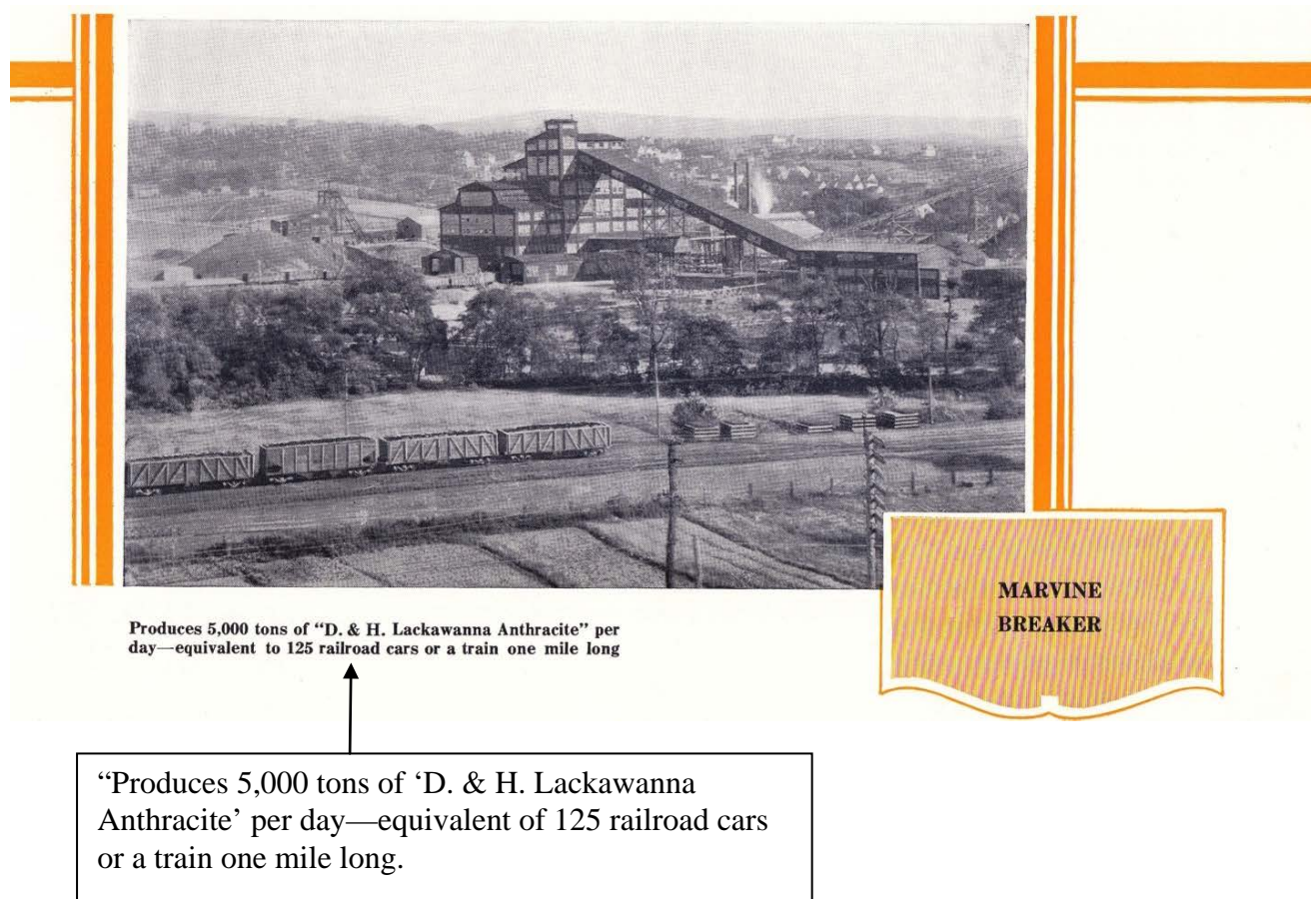


Here is the complete photograph:



The breaker in the background of this photograph does not appear to be the Marvine Breaker that was built in 1920. It may, however, be the original Marvine Breaker, the one that was taken down when the modern steel breaker was erected in 1920.

Here is the photo of the Marvine Breaker that is given in the Hudson Coal book, 1929:



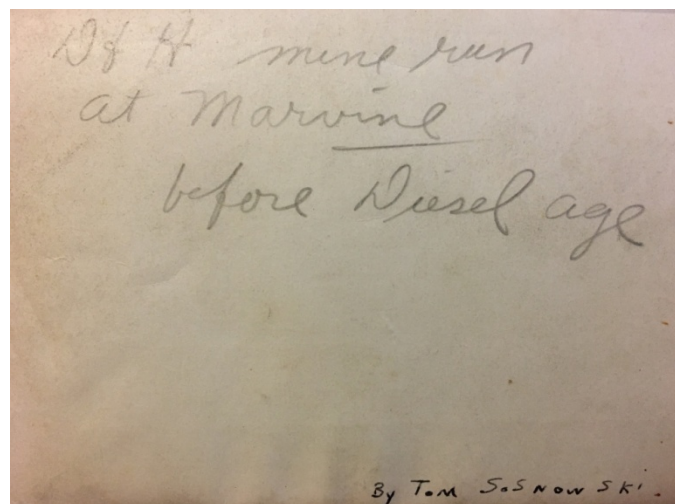
There is a photo of the Marvine Breaker in *Horgan*, p. 69.

Given below is a photograph by Tom Sosnowski of D&H No. 911 at the Marvine Breaker. A copy of this photograph was made available for use here by Brad Virbitsky (Jermyn, PA, and New York City) on July 11, 2017.



D&H No. 911 at the Marvine Breaker

Here is the back of the photograph given above. Written there is the following text: "D&H mine run at Marvine before Diesel age / By Tom Sosnowski":



Also made available on July 11, 2017 by Brad Virbitsky for use in these D&H volumes is the photograph of Joseph Yurgosky (born in 1910, died in 1997), shown below, standing in front of Union Pacific No. 3254, one of the engines in the Steamtown collection, on the occasion of a Steamtown excursion in the early 1990s. Joseph Yurgosky, the great grandfather of Brad Virbitsky, was “a foreman on the D&H” and he lived in Jermyn, PA.



Union Pacific, No. 3254, 4-8-8-4, and Joseph Yurgosky

1877

Mill Creek Breaker

The D&H's Mill Creek Shaft and Slope were located in Plains Township, Luzerne County. The superintendent was A. H. Vandling; the assistant superintendent was C. H. Scharer, both of whom were also in charge at the two other D&H collieries in the Second Anthracite District, Pine Ridge Shaft and Laurel Run Slope.

In *The Anthracite Coal Fields of Pennsylvania with their Outlets to Market* by Geo. B. Strauch and A. B. Cochran, Mining Engineers, Pottsville, PA, 1878, the Mill Creek Breaker is listed under the heading “LEHIGH AND THIRD, NORTHERN OR LUZERNE COAL FIELDS, Third or Luzerne Coal Field. Western or Wilkesbarre District,” the following Delaware and Hudson C. Co. collieries are listed: Mill Creek, Pine Ridge, Laurel Run, Baltimore No. 1, Baltimore No. 3, No. 2 Plymouth, No. 3 Plymouth, No. 4 Plymouth, No. 5 Plymouth.

On December 2, 1872, John Clark, a boy aged 14 years, was killed at the Mill Creek Breaker when his coat got caught in breaker machinery. Here are the details on this horrible accident as published in the *Carbondale Leader* of December 7, 1872:

“At Mill Creek breaker, on Monday, John Clark, a boy aged 14 years, was killed. He had been engaged picking slate, but at the time being out of work, he was roaming around the breaker, and while passing under a revolving shaft his coat caught and whirled him around, striking timbers which run close over head and on the side. When the machinery was stopped he was found mangled horribly, both feet being whipped off and the flesh from the bone as high as his knees.” (*Carbondale Leader*, December 7, 1872, p. 3)

In 1874, at the age of 9, James Morpeth went to work as a slate picker in the Delaware and Hudson’s Mill Creek Breaker, which stood on a site in the middle of the Hudson Yard. Very interesting details on his job responsibilities there at the time are presented in the biographical portrait of the man that is given in *The Delaware and Hudson Railroad Bulletin*, April 1, 1938, pp. 51-52, as follows:

“[James Morpeth] went to work at the age of nine, in 1874, as a slate picker in the Delaware and Hudson's Mill Creek Breaker, which stood on a site in the middle of what is now the Hudson Yard. Shortly afterward he was made car oiler at the head of the breaker. Strings of five 2 1/2 ton coal cars from nearby workings were pulled up a 250-foot plane to a track built on a level with the top of the breaker. Here they were uncoupled and run one at a time to the dumper which emptied them into chutes leading down through the breaker. Each day James filled the oil cups on the wheels on one side of every car dumped; the next day he oiled those on the other side.”

A large number of accidents at the Mill Creek Colliery are listed in the *Report of Inspector of Mines, 1879*:

p. 160: January 20, Mill Creek Colliery, William Rowley was slightly injured on side of face, and one arm, by explosion of gas. On February 8, Reuben Edwards was in a non-fatal accident (arm and one finger injured by car running on them) at the Mill Creek Colliery.

p. 161: On May 22, at Mill Creek Colliery, George Forcey was in a non-fatal accident (burned very slightly on face and elbow, by explosion of gas in his chamber) at the Mill Creek Colliery. On May 27, at the same colliery, Ed Ayres and C. Maston were in a non-fatal accident (Ayres had face and leg, and Maston hand, severely injured by piece of roof falling on them).

p. 163: On September 9, John Forcey, at Mill Creek Colliery, had a leg broken by falling in front of truck, which ran over him. On September 13, at the same colliery, George Martin was slightly burned by explosion of gas.

p. 164: November 19, Thomas Haggerty was injured seriously while playing with culm cars at foot of outside plane.

p. 166: Mill Creek Colliery, June 20, Charles Rannard was fatally injured by a thin piece of rock falling on him, breaking over props.

p. 168: November 2, at Mill Creek Colliery, Zac Thomas (age 38, married, with four children), David Jenkin (age 66, married with three children), William Kinney (age 24, married), George Forsyth (age 38, married with seven children), and David Rupp (age 35, married with three children) were all killed by the effects of an explosion of gas.

Several accidents at the Mill Creek Colliery are listed in the *Report of Inspector of Mines, 1887*:

p. 37: June 14, Peter Wimmers (a laborer, age 28, married, with one child) and Simon Charnoski (a laborer, age 25) were both killed at the Mill Creek Colliery by a fall of top-rock.

p. 40: On April 6, Lewis Dempsy, a miner, age 35, was seriously injured by a premature blast at the Mill Creek Slope.

p. 41: On June 14, John Parduski (a miner, age 42, married, with four children) and Michael Ostroski (a miner, age 38, married, with four children) were both in non-fatal accidents (possibly the same fall of rock) at the Mill Creek Colliery, Parduski was seriously injured by a fall of rock; Ostroski seriously injured his leg so as to make amputation necessary.

1878

Mine Fire Breaker, Carbondale

This breaker was located on the West side of the D&H tracks in Carbondale, on the bluff behind the present-day Mancuso Beer outlet, at the edge of the Carbondale West Side Mine Fire. It was

used to process the coal that was removed from the Mine Fire site in the 1960s. A portion of the former O&W trestle can be seen at the far right of the photograph. Our thanks to John V. Buberniak who made available for use here this very rare photograph of this breaker on November 20, 2015.

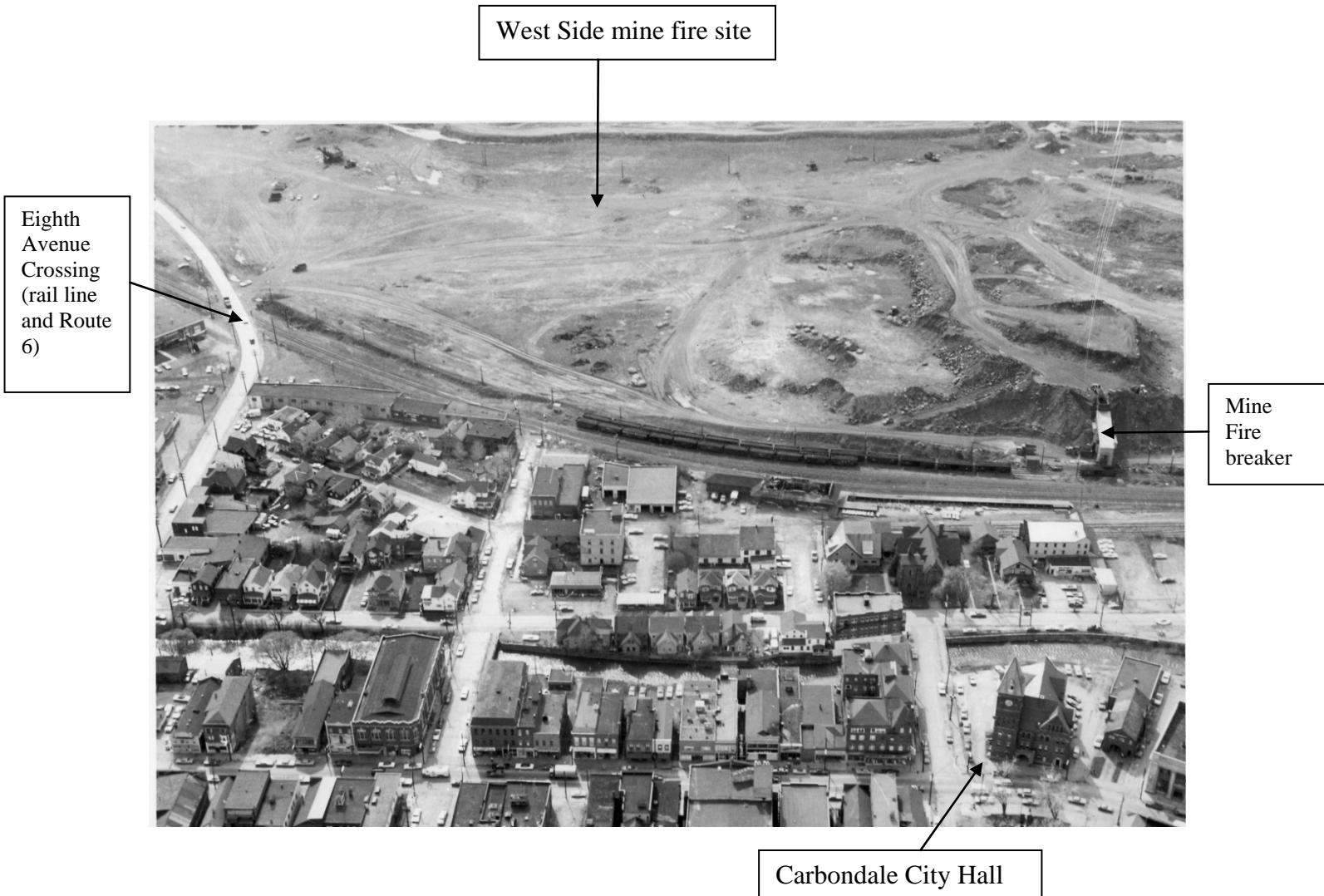


Mine Fire Breaker, Carbondale

On March 23, 2017, Skip Race, Carbondale said the following when he was shown this photograph:

“Not really a breaker per se. It was a processing plant to get the coal from the mine fire site to market. This was in the late 1960s. George Hobbs and I drove front-end loaders to dump the coal into the cars. Tom Farrell was the foreman of the Mine Fire Reclamation project. Jim Brownell was also a foreman. Jack Gillen had control of the entire Mine Fire site. George Mills was the blaster/mechanic on the site. The two Miller brothers from Clifford were equipment operators, heavy equipment. Sam Liuzzo was one of the shovel operators. Tom Grandinetti was one of walker shovel operators. Tom McDonald drove one of the Euclids. Ronny Hull was also a Euclid operator; also Joe Sparrow.”

Here is a photograph of the West Side Mine Fire area that was taken by Ros-Al Studios, 56 North Main Street, Carbondale, Pa. 18407; photograph donated to the Carbondale Historical Society by Nellie Connolly, Carbondale. In this photograph, the Mine Fire Breaker and its operations can be seen.



1879

Moffat Coal Company

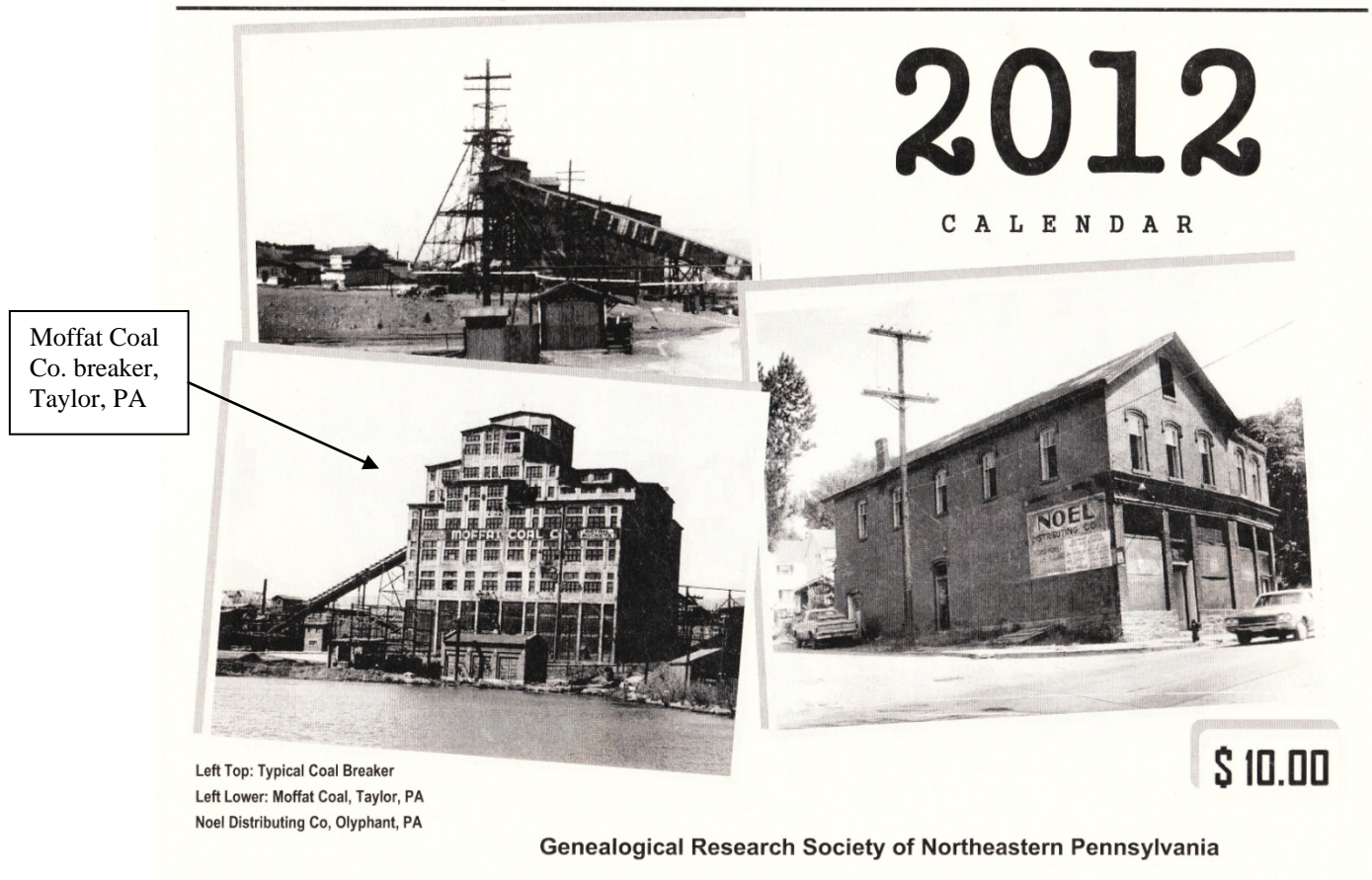
“The Moffat Breaker, or Taylor Breaker, was built by the Delaware, Lackawanna and Western Railroad Company in 1915-1916. At the time, it was described as an experiment in revolutionary breaker design and construction. It came at a time when the D, L and W [sic] was heavy into using concrete for its [sic] structures.. The Moffat, however, was the first all reinforced-concrete breaker, containing 500,000 feet of lumber for machinery bedding and other fittings. / The concrete structure was unable to fully support the heavy machinery, and much cracking occurred from this and the settling of the footings. In 1920, the W. Y. Moffat Coal Company acquired the Taylor Breaker. In the 1970s Pagnotti Enterprises owned the breaker and it was torn down around 1980. Rubble, some machinery and a few ancillary buildings remain on the site today.” (Tony Wilson, Internet: Moffat Coal Company)

Here is a photograph of the Moffat Coal Co. Breaker in Taylor, PA. Photo dated August 1976.



*Moffat Breaker
Taylor Pa.
E. Weston
August 1976*

A black and white photograph of the Moffat Coal Company Breaker in Taylor is given on the front cover of the *2012 Calendar* that was produced by the Genealogical Research Society of Northeastern Pennsylvania, as follows:



1880

Moosic Mountain Coal Company Breaker

Moosic Mountain Colliery operated by the Moosic Mountain Coal Co., Marshwood

In the *Reports of the Inspectors of Mines*, 1887, p. 3, we read the following about the Moosic Mountain Coal Company Marshwood Colliery:

“Moosic Mountain Coal Company—Marshwood Colliery have everything ready to ship coal when branch track to breaker is finished. Are now pushing the work rapidly forward.”

James Marion Everhart (b. in Berks County, PA, June 7, 1828), the well known Scranton manufacturer, coal operator and capitalist, was the managing director of the Moosic Mountain Coal Company; also an organizer and director of the Moosic Mountain Railroad Company. Those facts we know from the biographical portrait of James Marion Everhart in *PABRLC*, pp. 747-750, + photo on p. 746. Everhart was also managing director of the Mt. Jessup Coal Company, and president of the Everhart Coal Company.

From an article that was published in *The Journal* of August 15, 1887, we learn the following facts about the Moosic Mountain Railroad:

“Work has commenced on the new Moosic Mountain Railroad. We believe the route has been surveyed from Jermyn to Dunmore, but at present will be constructed only from the D. & H. R. R. at Winton to the Davis breaker of the Moosic Mountain Coal Co. on the top of the mountain ridge north of Dunmore, a distance of about four miles. The road is to be completed in three or four months.” (*The Journal*, August 25, 1887, p. 3)

1881

Motley Coal Company

The Motley Coal Company Breaker was located in Mayfield, PA.

On Saturday, March 6, 1954, the four-story breaker of the Motley Coal Company at Mayfield burned down. Eighty men were thrown out of work as result of the fire. The following account of the fire was published in a Carbondale newspaper on March 8, 1954:’

“... Saturday morning’s fire leveled the four-story breaker of the Motley Coal Co. at Mayfield. / The fire was discovered at 1:45 a. m. by Joseph Migliori, 144 Cottage St., a night watchman at the plant, who started on his watch around 15 minutes earlier. He told authorities that flames were shooting from the top of a wooden elevator over an abandoned shaft. The shaft had been used some time ago to haul mine cars into the breaker directly from the mine operation. Sandy Consagra, Carbondale, operated the coal processing plant in partnership with Mrs. Mae Motley, Clarks Summit. Eighty men were thrown out of work as result of the fire.” (Carbondale newspaper, March 8, 1954)

1882

Mt. Jessup Colliery

The Mt. Jessup Colliery was operated by the Mt. Jessup Coal Co., Marshwood.

James Marion Everhart (b. in Berks County, PA, June 7, 1828), the well known Scranton manufacturer, coal operator and capitalist, was the managing director of the Mt. Jessup Coal Company. That we know from his portrait in *PABRLC*, pp. 747-750, + photo on p. 746. Everhart was also managing director of the Moosic Mountain Coal Company, and president of the Everhart Coal Company.

1883

Mount Pleasant Breaker

In 1878, the Mt. Pleasant Colliery was operated by the Mt. Pleasant Coal Co. The colliery was in Hyde Park, Scranton.

Here is a post card photograph of the Mount Pleasant Breaker that is in the collection of the Carbondale Historical Society:



“Scranton, Pa., Mt. Pleasant Breaker”

On Tuesday, March 9, 1875, Henry Welsh got caught in a coal screen at the Mount Pleasant Colliery, Hyde Park, and was crushed to death. One of Welsh's companions, John Owens, in trying to extricate his companion from the screen, was also killed. As the *Carbondale Advance* noted in its report on these tragic deaths, Owens' act of heroism furnishes "an example of heroism and self sacrifice seldom heard of, and entitling his name to be handed down to remotest posterity." Here is the report on these deaths from the *Carbondale Advance* of March 13, 1875:

"A boy named Henry Welsh got caught in a coal screen at Mt. Pleasant colliery, Hyde Park, on Tuesday afternoon, and was crushed to death. A lad about thirteen years of age, named John Owens, in trying to extricate his companion, was also killed, furnishing an example of heroism and self-sacrifice seldom heard of, and entitling his name to be handed down to remotest posterity." (*Carbondale Advance*, March 13, 1875, p. 3)

On June 27, 1883, Isaac Morgan was killed by runaway coal cars at the Mount Pleasant Colliery. Here is the report on the accident that was published in the *Carbondale Advance* of June 30, 1883:

"Killed in the Mines. / At the Mount Pleasant colliery Wednesday forenoon, Isaac Morgan, who lived on Main avenue, Hyde Park, and several other miners were sitting at the foot of the slope waiting for a chance to go out. The hook of the chain broke, and the trip of cars which was going up ran back to the bottom. The other miners heard the cars thundering down the slope and stepped to a place of safety. Morgan, in attempting to cross the track, was caught by the cars. He was taken out of the mine alive, but died in a few minutes." (*Carbondale Advance*, June 30, 1883, p. 3)

In the *Reports of the Inspectors of Mines*, 1887, p. 3, we read the following about the Mount Pleasant Slope:

"Wm. T. Smith—Mount Pleasant Slope.—Sinking a new shaft to Clark vein. Size of shaft opening is 30' x 11'. Depth of shaft from surface to bottom of little vein, 27 feet; Diamond vein, 139 feet; Rock vein, 171 feet; G or Big vein, 241 feet; new County vein, 292 feet; and to Clark vein, 365 ½ feet."

1884

Nealon & Gilmartin Breaker

In January 1875, Messrs. A. B. Nealon and Michael Gilmartin purchased the coal lands of Joseph Birkett in Carbondale. The terms of the sale are given in the article about the sale that was published in the *Carbondale Advance* of January 2, 1875, as follows:

"Sale of Coal Works. / We are informed that Mr. Joseph Birkett has sold his coal lands in town to Messrs. A. B. Nealon and Michael Gilmartin--consideration \$12,000. The sale, we believe, embraces what remains of the first and second veins of coal and the yet unopened third vein, with the Breaker and machinery used in the business--subject to the lease of Thos. Brennan. The purchasers receive the royalty from him as it accrues, and take possession immediately. The surface we learn is not included in the sale." (*Carbondale Advance*, January 2, 1875, p. 3)

In February 18875, Messrs. Nealon and Gilmartin, the new owners of the Birkett coal lands, purchased the lease of Michael Loftus to the "Clark" coal lands, which were owned by Watt Bros., Scurry and Stuart. In the *Carbondale Advance* of February 6, 1875, we read:

"Messrs. Nealon & Gilmartin who recently bought the Birkett coal property, have also purchased the lease of Michael Loftus to the "Clark" coal lands, now owned by Watt Bros., Scurry and Stuart." (*Carbondale Advance*, February 6, 1875, p. 3)

1885

Northeast Colliery

The Northeast Colliery was located in Simpson, PA.

The Northeast Colliery, which opened in 1906, was not owned by the railroads. Its total output, 107,200 tons. It was abandoned in 1916. This breaker stood on the east bank of the Lackawanna River, nearly opposite the Northwest Colliery of the Sterrick Creek Coal Company.

In 1906, George Wengrin, age 16, was killed at the Northeast Colliery. See *Walsh*, p. 21

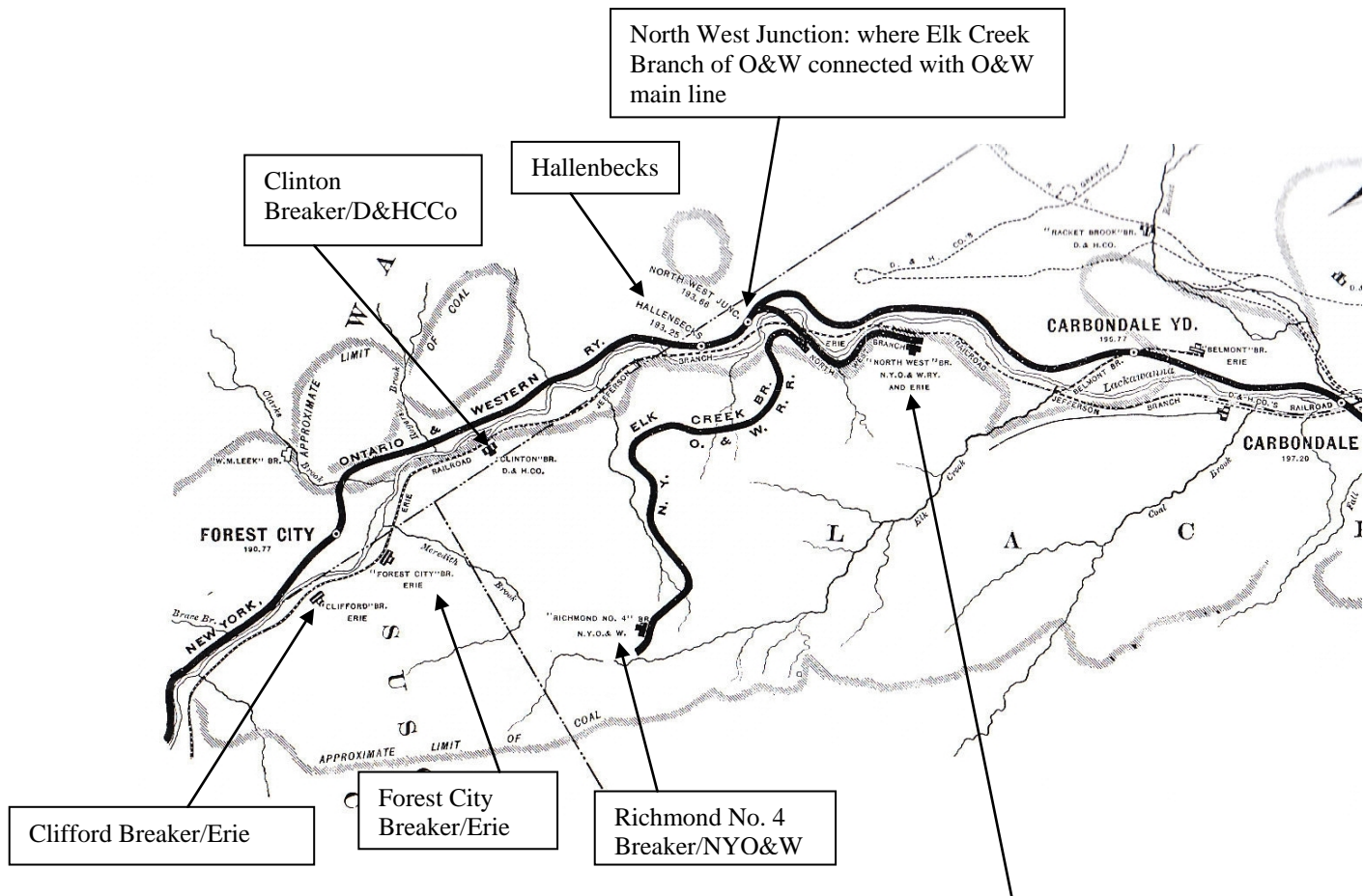
Here is a Northeast Coal Company stock certificate for two shares of the capital stock of the Northeast Coal Company, dated October 31, 1908. The original of this certificate is in the collection of the Forest City Historical Society, and was made available on May 31, 2017 for publication here by Peggy Brager.



1886

Northwest Coal Company Breaker

There were two Northwest Coal Company Breakers: Northwest Coal Company Breaker No. 1 (which was about a mile south of Northwest Coal Company Breaker No. 2, which is shown on the O&W map given below) and Northwest Coal Company Breaker No. 2.



North West Breaker/NYO&W and Erie: In the early 20th century, production shifted from Northwest Colliery No. 1 to Northwest Colliery No. 2. Northwest Colliery No. 2 was on an O&W spur line to this and the other O&W collieries in the Richmondale area. Northwest Junction was where the Elk Creek Branch and the North West Branch of the O&W connected with the O&W main line. This O&W spur consisted of more than 3 miles of track, many switchbacks, and a steel bridge across the Lackawanna River and over the tracks of the Jefferson Branch of the Erie. Coal was produced at Northwest No. 2 into the 1950s. Many name changes took place over the years: Northwest Coal, Jones-Simpson, Temple Coal, Triplex Coal, Norwesco, Maryde.

The Northwest Coal Company Breakers were located in Simpson, PA. The total output of coal from both Northwest Collieries was 9,623,300 tons.

See *Walsh*, pp. 21-23 for a list of the names of the persons who were killed at these breakers.

We have not yet learned the exact date when the first Northwest Coal Company Breaker in Simpson opened, but it may have been in 1885, for in that year, as we learn from the article given below from the *Carbondale Leader* of December 25, 1885, "the new breaker of the Northwest Coal Co." burned on Tuesday, December 22, 1885. Here is that article:

"The new breaker of the Northwest Coal Co. was destroyed by fire Tuesday evening. The fire alarm caused quite a sensation along the gravity as many thought at first that one of the engine houses was on fire." (*Carbondale Leader*, December 25, 1885, p. 8)

On Christmas Day, 1885, four days after the Northwest Breaker burned, two men were killed and several others were seriously injured in the mine of the Northwest Coal Company. Here are the details on the accident as published in the *Carbondale Leader* of December 29, 1885:

"A FATAL MINE ACCIDENT. / Two Miners Killed and Several Others Injured at the Northwest Coal Co.'s Mine. / The Northwest Coal Company's works just north of the city was the scene of another disaster on Friday, this time involving loss of life on the part of two men and the serious injury of several others. The correspondent of the *Scranton Republican* from this city gives the following account of the accident, which, we understand is a true statement of the facts:-- / A number of men were employed at driving a slope, and the work was pushed forward rapidly. On Thursday evening five holes were drilled and loaded with giant powder and dynamite, and fired off with electricity by a shift of which Richard Taylor had charge. In entering the chamber Friday morning, Taylor found that three of the charges had failed to go off. Taylor made an examination and found that the explosion had failed on account of defective caps. He set John Luke and David Davis at work removing the caps, cleaning the holes and charging anew. Two of the charges were placed in all right but as the men were removing the cap from the third hole, the charge exploded. Taylor was standing close to the hole and the flying rock struck him in the abdomen, tearing him open and injuring him so frightfully that he died two hours after. John Luke was cut by the flying stone and injured in a number of places. He died the following morning. Davis escaped with slight injuries consisting of cuts about the head and face. His escape from a terrible death is deemed almost miraculous. The other men working with the shift were David Evans, whose hand was injured, David Cushney, who sustained a broken arm, and a brother-in-law of Taylor who escaped with a few scratches. / As soon as the members of the shift who were slightly injured could recover from their amazement they gave the alarm and Dr. Bailey was summoned. The injured men were removed to their homes and their injuries ascertained to be as given above. Taylor was married and leaves a wife and several

children. Luke was a widower who came from Nanticoke about two weeks ago and who began that morning to work in place of Richard Hull. It was reported that Taylor had a brother who is supposed to have perished in the disaster at Nanticoke last week.” (*Carbondale Leader*, December 29, 1885, p. 4)

On June 8, 1886, the week-long strike of the workers at the Northwest Colliery came to an end. On June 4, 1886, J. L. Crawford, the superintendent of the Hosie works in Jermyn, became the General Superintendent at the Northwest Colliery. In the *Carbondale Leader* of June 8, 1886, we read:

“A Change at the Northwest. / The strike at the Northwest colliery Co’s works is ended after about a week’s durance and work is to be resumed to-day. A change in the management occurred last Friday, General Superintendent Shepherd having resigned to give his whole attention to the growing business of the Carbondale Lumber Co., of which he is president. J. L. Crawford, superintendent of the Hosie works in Jermyn succeeded him in charge.” (*Carbondale Leader*, June 8, 1886, p.

From the *Reports of the Inspectors of Mines*, 1887, p. 7, we learn (1) that at the Simpson Slope and Tunnels, Fell Township, Lackawanna County, 105,781.18 tons of coal were produced in 1887, (2) that 218 persons were employed in those mines, and (3) that 27 horses and mules worked at the Simpson Slope and Tunnels.

The following accidents are reported in *Reports of the Inspectors of Mines*, 1887, for the Northwest Colliery at Simpson:

p. 14: January 29, Fenko Marshnek, age 35, working at the Simpson Colliery, N. W. C. Co., Lim., Fell Township, Lackawanna County, was in a non-fatal accident. (leg broken; slope rope slipped off sheave and struck his leg).

p. 14: February 5, Charles Hull, age 22, working at the same colliery, was also in a non-fatal accident (leg broken; car ran over it).

p. 18: Thomas H. Huddy, age 34, working at the same colliery, was in a non-fatal accident (right leg broken; fall of rock).

As was his wont, Patrick Dixon, who lived on Dundaff Street in Carbondale, took the cars to the Northwest Colliery, where he worked as an engineer. When he jumped off the cars in Simpson,

his feet slipped and he fell across the track and was very seriously hurt. Both of his legs were amputated that day by Dr. Bailey. Chances of his recovery were not good. In *The Journal* of January 13, 1887, we read:’

"Shocking Accident. / A shocking accident occurred early this morning at the Northwest Coal Company's breaker, above town. Patrick Dixon, of Dundaff street, a young man of 31 years, who was employed as engineer at the breaker, as was his wont, took the cars part way to his work, and on reaching his destination jumped off. His feet slipped, and he fell across the track. The engine passed over both his legs, crushing them terribly, and he also received an extensive scalp wound. He was taken to his home and Dr. Bailey called who decided to amputate both limbs as soon as the unfortunate young man rallied sufficiently. At last accounts he had not rallied from the shock caused by the accident and it is said that he cannot recover. He is the only support of a widowed mother and invalid sister. Later--Dixon died at 5:15 this afternoon." (*The Journal*, January 13, 1887, p. 3)

In mid-March 1887, Frank Lamoreau, formerly the watchman at No. 5 on the Gravity Railroad, became the night watchman at the Northwest Breaker. Also at the Northwest Breaker at this time, Joseph Alexander was awarded the contract to paint the new row of houses that were erected near the Northwest Breaker. In the *Carbondale Leader* of March 22, 1887, we read:

“Frank Lamoreau, watchman at No. 5 [on the Gravity Railroad] has resigned, and is now filling a like situation at the Northwest Co’s breaker. / Jos. Alexander has the contract to paint the new row of houses erected near the Northwest coal breaker.” (*Carbondale Leader*, March 22, 1887, p. 4)

A more convenient and direct rail route to the Northwest Breaker was installed in August 1887. The medical doctor who looked after those who lived in the vicinity of the Northwest Breaker was Dr. Bailey. Those two facts we know from the following article that was published in the August 11, 1887 issue of the *Carbondale Leader*, as follows:

“The News in Simpson. / . . . Supt. J. L. Crawford has surveyed a more convenient and direct route to the [Northwest] breaker and workmen are busily engaged in grading it. Quicker time will be made when the new locomotive arrives and miners will be well supplied with cars. / . . . The Northwest breaker was idle Monday afternoon, in consequence of a large wheel of the hoisting engine at the slope breaking, but Supt. Crawford had everything in running order the following morning. / . . . Dr Bailey is looking after the health of this thriving locality but the Dr’s genial countenance is all the medicine that is needed here just now. Medicine or no medicine the doctor is always a welcomed guest.” (*Carbondale Leader*, August 11, 1887, p. 4).

From an article that was published in the September 16, 1887 issue of the *Carbondale Leader*, we learn that in September 1887 that more than 300 cars of coal passed through the Northwest Colliery daily without any delays. We also learn that a new blacksmith shop was erected at the mouth of the slope at the Colliery, and that a mule barn was under construction there. Here is that article:

"SIMPSON NEWS NOTES. / The Northwest Colliery to Pay Semi-Monthly—Business Booming. / SIMPSON, Sept. 16.—The additional machinery that has lately been put in is working very satisfactorily. Much credit is due J. H. Boyle in adjusting and fitting the complicated parts. Over three hundred cars now daily pass through the breaker without any delays. / A new blacksmith shop has lately been erected at the mouth of the slope, and a mule barn is in course of erection at the same place / E. L. Bevan, our gentlemanly and competent shipping clerk, in the short time he has been here has made himself popular by his obliging manners and correctness in business transactions. / The extension of roads and the addition of new machinery has given the breaker a facility for producing and preparing coal that in time will make it second to none on the line. / Supt. Crawford informs us that the Northwest Coal Co., which he represents, will fall in line with the other companies in distributing semi-monthly payments. . ." (*Carbondale Leader*, September 16, 1887, p. 4)

On Saturday, October 15, 1887, an extensive smash-up took place in the Erie Yard at the Northwest Colliery. Remarkably, no lives were lost in this smash-up. The following article from *The Journal* contains the details on this frightening accident:

“Smash-up in the Erie Yard. / An extensive smash-up occurred in the Erie yard on Saturday afternoon. A train consisting of a number of loaded coal cars were standing at the Northwest Coal Co.’s colliery, just ready to start for the yard, when Erie Extra Coal 6 came thundering around the curve only a short distance above. Engineer Schermerhorn and Fireman Kegler, of the oncoming train, saw the danger and jumped from the engine, the throttle of which was wide open when the collision occurred and the speed of the train rapidly increasing. Conductor Gerrity, who had charge of the train at the colliery, climbed on the moving train, ran forward on the tops of the cars to the engine reversing it and shutting off the steam. Seven of the loaded coal cars broke loose and dashed into the yard at a furious rate of speed. Here two engines, Nos. 604 and 633 stood on adjacent tracks. Before reaching them the runaway cars jumped the track, which caused them to strike both engines with tremendous force. One of the engines was badly wrecked, and the front end of the other badly shattered. The seven coal cars were completely demolished, and the damage done was considerable. There were a number of narrow escapes, but no lives were lost.” (*The Journal*, October 20, 1887, p. 3)

On November 4, 1887, an extensive fall of roof took place in the mines of the Northwest Coal Company. Six men were hurt in this accident, one of them, Thomas Huddy, severely. In *The*

Journal of November 10, 1887, we read:

“An extensive fall of roof occurred at the Northwest Coal Co.’s mines, above town, on Friday morning. Thomas Huddy, a miner, was severely, and it was at first thought, fatally injured. Five other men were less severely hurt. Dr. Bailey and his assistant were at once summoned to attend to the injured man. Huddy has been steadily improving and is out of danger.” (*The Journal*, November 10, 1887, p. 3)

A man, from Poland, known to his supervisor as “Sidewalk” was suffocated by a cloud of coal dust in the buckwheat chute at the Northwest Colliery on December 30, 1887. Here are the details on this frightening accident that are reported in the *Carbondale Leader* of December 31, 1887:

“A POLE’S UNUSUAL DEATH. / Suffocated by a Cloud of Coal Dust Yesterday Afternoon. / He Crawled Into a Chute at the Northwest Colliery and When He Was Found he was Lifeless—The Coroner was Notified and Will Hold an Inquest. / A dreadful accident occurred at the Northwest colliery yesterday afternoon. A Polander who is known to the foreman as ‘Sidewalk,’ is employed at the buckwheat chute loading the small cars that are run up a back plane to the fire rooms of the engine house, as this coal is used exclusively for generating steam. The chute is at one of side of the breaker and a board is used in lieu of the regular gate that closes the opening at the apron where the cars are loaded. The chutes frequently choke or clog up and the loaders are obliged to use some means to start it. An opening is made in the top of the pocket and a plank fitted so that it can be easily removed. Through this opening the mouth of the pocket or chute can be safely reached and the jam of coal started when it will run until another clog occurs. / It is supposed one of these ‘chokes’ occurred yesterday afternoon and the Polander, instead of going through the breaker into the pocket as provided for, removed the board from the mouth and crawled up the inclined slide. The fine coal starting suddenly he was quickly covered by the moving mass and instantly smothered. The coal continuing to run, his body was after a time lifted and forced against the lower wall of the pocket; for when found his body stood almost erect. Martin Neary who is employed as carpenter about the works was one of the men who entered the pocket to remove the body. With them was the brother of the unfortunate man, almost wild with grief and Mr. Neary fearing that the man would be injured or caught in the belting attempted to keep him from the danger, and stepped too near the shafting when a clamp struck him just above the ankle, tearing his pantaloons and crushing his heel. Fortunately he was wearing heavy boots. This prevented more serious injury to his limb and enabled Mr. Neary to step out of the way avoiding the second blow from the protuberance upon the rapidly revolving shaft. / The unfortunate man who was suffocated was smothered more by coal dust than anything else. When the mass began to move a cloud was raised and his lungs and throat were filled with the black powder. He was in the chute for fully fifteen minutes before his body was discovered and he would not have been found so soon, probably, had not a fellow laborer, Jackson Daley,

made inquiries as to his whereabouts and receiving no information from anybody instituted a search which resulted in the discovery of a pair of boots in the opening of the chute and the subsequent recovery of the body. / The coroner has been notified and will probably hold an inquest to-day.” (*Carbondale Leader*, December 31, 1887, p. 4)

Andrew Oudko and Andrew Stupho, both Hungarians, were injured, Oudko very seriously at the Northwest Colliery, when the miners in the adjoining chamber set off a blast which blew through into the chamber where Oudko and Stupho were working. Here are the details on this accident as published in the *Carbondale Leader* of January 6, 1888:

“Two Hungarians Injured at the Northwest Colliery. . . / At the Northwest colliery yesterday two Hungarians were injured by the premature explosion of a blast. Their names were Andrew Oudko and Andrew Stupho. The miners in the adjoining chamber were driving an entrance or an opening for the passage of the air, and did not realize that they were so near through. Oudko was standing close to the wall when the blast went off, and the body of coal was blown into his chamber, a portion of it striking him in the back, hurling upon him the broken coal and slate and completely covering his body. / Stupho was not in line of the opening and escaped with a few severe bruises and one scalp wound, but is not seriously injured. He gave alarm and the men whose reckless work had caused the accident came in. Oudko was carried to the heading, and taken at once to his home. Upon removing his clothing his body was found to be frightfully cut, one gash in his thigh formed a pocket from which several pieces of coal as large as a hickory nut were taken. Another cut on the right shoulder was quite as bad, while his back was literally a mass of cuts and bruises, his left arm was lacerated from the elbow to the hand and both legs received a free share of small cuts. That he escaped instant death is the wonder to the men employed in the mines. He is pretty thoroughly cut up Hun, but no bones were broken and the probability is that in a few weeks at most he will be at work again. Had the men who were cutting the ‘entrance’ known that there was danger of blowing through they would have warned Oudko in time to leave his chamber before the explosion took place. In addition to being skilled as miners, men who have in charge the work of blasting should exercise every precaution, lest accidents of this kind occur. This will probably prove a lesson. . . .” (*Carbondale Leader*, January 6, 1888, p.4)

On December 28, 1889, a wedding, Hungarian style, took place at the Northwest Colliery. The reporter from the *Carbondale Leader*, who attended the wedding, was not able to learn the names of the bride and groom. That reporter did, however, in his article for the *Carbondale Leader* of December 31, 1889, describe some of the customs that characterized a Hungarian wedding at that time:

“A Hungarian Wedding. / The Northwest had on its holiday colors last Saturday, the event being a Hungarian wedding with all the manners and customs used on those occasions in the land

of the Hun. After the marriage ceremony, which was something similar to ours, the festivities began. The younger people adjourned to one room where the 'light fantastic' was tripped to the stirring strains of an imported accordeon. The older heads retired to the refreshment room where Honesdale beer was on tap. After a while the razzle dazzle began and the fighting commenced with it. Some of the groom's friends thought it an excellent chance to give him a wedding present, and, according to their custom, gave him a drubbing. The names of the contracting parties could not be learned." (*Carbondale Leader*, December 31, 1889, p. 4)

On March 15, 1890, a frightful explosion, resulting in the instant death of two persons, the fatal injury of two others, and the more or less serious injury of four more, took place at quarter past eleven o'clock in the morning at the Northwest colliery. The details on this horrifying explosion are presented in the following article that was published in the *Carbondale Leader*, March 15, 1890, p. 3:

"A FRIGHTFUL EXPLOSION / THREE BOILERS BLOW UP AT THE NORTHWEST COLLIERY. / Causing the Death of Two, and Serious Injury of Several Others—The Particulars of a Horrible Disaster This Morning. / A frightful explosion, resulting in the instant death of two persons, the fatal injury of two others, and the more or less serious injury of four more, took place at quarter past eleven o'clock this morning at the Northwest colliery. Following is a list of the killed and injured: Bert Ross, killed. / Richard Whithington, killed. / John Ross, fatally burned. / John Thomas, fatally burned. / John Molosky, slightly injured. / Henry Fenwick, head and hand burned. / George Ross, burned about the arms. / Bert Ross and Whithington were slate pickers; George Ross outside foreman, Henry Fenwick, the engineer; Thomas and John Ross, slate pickers and John Molosky, a Hungarian laborer. Three of these are in one family, a father and two sons. / At the time of the accident five boys, slate pickers, were in the boiler room eating their dinners. It was an unusual hour for dinner, but the breaker had run out of coal and they took the opportunity of eating their usual noon meal. On the outside of the boiler room were three Hungarians sitting along the foundation of the building. It was the custom of these boys and men to crowd around this place during dinner time because it was warm. The Engineer was alone in the engine room. / There were three boilers, each weighing in the neighborhood of three tons apiece. The nest was enclosed in a wooden structure a few feet north of the breaker, in the lower part of which was the engine room. Below these down the bank is the weighmaster's office, in which were C. L. Tuttle, J. H. Raynor, the weighmaster, and Thomas Keating, an outside laborer. In the breaker and within reach of possible danger were scores of boys and men, in all possibly over a hundred. That more were not injured is a thing remarkable about this as it is with so many accidents. / It was only about two minutes before the explosion when Fireman Collins noticed the boilers acting queerly. An instant later the doors of the fire box blew open and Collins realized that there was immediate danger. Shouting to the boys who were eating their dinners and chatting, Collins told them to run for their lives without a moment's delay. /The warning was so sudden and the alarm so apparently unnecessary that the boys did not

comprehend until several seconds of precious time had been lost—and this delay caused the death of two and in all probability four of them. Fireman Collins ran out of the building under the coal shutes, followed by one boy; the four others attempted to run up a pair of steps into the engine room, but got only half way. / Collins says he had no more than got in a safe place when the mighty steam blew the building and boilers from their places. The building was completely shattered. One boiler, or rather a section of one of the boilers, weighing several hundred pounds, was thrown clear through the breaker and with it the engineer, who was picked up twenty feet from the building. The boiler was thrown from its original resting place fully thirty feet. The engine room was completely demolished, except that the engine is not thrown from its bed. / Another boiler was lifted and sent bodily in the opposite direction, burying its end in the culm and ashes about twenty feet from its base, while the third boiler was lifted and sent against the corner of the breaker, but it did not burst. The smoke stack, a tall, heavy iron structure, fell in the most fortunate direction possible—against the hill, doing no damage. Had it fallen the opposite way it would have crushed in the roof of the frail weighmaster's office below and possibly three more deaths would have had to be recorded with this horrible affair. / When the immense clouds of steam had disappeared so that it was possible to see anything, Foreman Tuttle sent Mr. Raynor to the store of the Northwest Company to dispatch a messenger for physicians, while he ran up the bank to see the result of the explosion. A frightful sight met his eye. Jammed in between a stone wall and the debris were two dead bodies and underneath another pile were two more, one of them being held down by a sheet of red hot iron. He pulled the iron off and dragged the bodies out. / One of the Hungarians John Molousky, laborer was lifted from his seat on the outside by the explosion fully fifteen feet into the air, it is said, falling down the bank near the weighing office. The other Hungarians were thrown down the bank, but were not seriously injured. Molousky's side is injured, but it cannot be known yet how badly he is hurt. / Strange to say Fenwick, the engineer, though he was blown through the side of the building and was burned about the head and hands, is not fatally hurt. When he recovered his senses, he arose and walked to his home. / The Ross family live just north of the Cyphers' hotel in Fell Township. The dead body of their boy and the other injured boy with the father were taken there for treatment. The living boy is a pitiful sight. He is scalded deeply on different parts of the body, and it is thought he was burned internally by inhaling steam. At the time of the accident it was not thought possible that he could live, and he may be dead when this account is read. / The Thomas boy is thirteen years of age, a son of John T. Thomas who lives at Simpson village. He is literally boiled and the flesh came from his bones at a slight touch. There is scarcely any part of his body that is not thus horribly burned, and he cannot live. If he lives any length of time he will suffer horrible torture. / It was a sad sight at the houses of the dead and injured. A husband and two boys taken home to a wife and mother—one a corpse, another dying and another badly injured. The imagination will picture this scene, and the others. Fenwick the injured engineer, lives near the breaker, and is married. / The news of the disaster was brought to this city by a messenger on horseback who came for Doctors Wheeler and Gillis. When Erie yardmaster Gerrity heard of it he offered the use of locomotive 656, manned by Engineer Schermerhorn and Fireman Norris,

and on this the surgeons and a reporter were taken to the scene at a lightning speed. The reporter is indebted to these gentlemen and to Messrs. Tuttle and Raynor for the facilities for obtaining such complete details in a short space of time.” (*Carbondale Leader*, March 15, 1890, p. 3)

Two days later, the *Carbondale Leader* carried a follow-up article on the accident. The cause of the explosion was still unknown. The boilers at the breaker were said to be in good condition and were not believed to have been the cause of the explosion. One of the boys killed in the explosion, Johnnie Thomas, was the carrier for the *Carbondale Leader* at Simpson. He was buried on March 18 at The Ridge, below Jermyn. A short service in Welsh was held before his interment. Here is that follow-up article on this horrifying accident that was published in the *Carbondale Leader* of March 17, 1890:

“SUFFERING AND DEATH. / Four Deaths the Result of the Northwest Colliery Explosion—The Loss to the Company \$6,000. / Four of the victims of the Northwest colliery explosion are dead. John Ross died at half past two on Saturday afternoon, and John Thomas at half past ten at night, after suffering the horrible tortures that burns will produce. The agonies of the latter were terrible to see, and they moved even surgeons who are so accustomed to such scenes. There was scarcely an inch of his body, except where his boots covered his legs that had not been scalded, and the features were so blistered and disfigured that the boy resembled anything more than a human being. Johnnie Thomas was the carrier for THE LEADER at Simpson, a bright, fine little fellow, loved by all his comrades, and the evidences of their sorrow over his fate were many. / Mr. Ross, father of the two dead brothers, is a pitiable sight, his head, both hands and arms and one leg are badly burned, and he suffers intense pain. It is too soon yet to tell how serious his injuries are, but it is thought that he will recover. The outcome of a scalding is so uncertain that for nine or ten days it is impossible to give an assurance of recovery, physicians asserting that if one-third of the body be burned, even in the most favorable places, the patient is almost certain to die. / Richard Whittington, the other dead boy was the most horribly mutilated. His scalp was torn from his head and his skull crushed so that the brain was bared, while his body from head to foot was parboiled so that the greatest care had to be exercised in handling him lest the flesh be torn from the bones. / Engineer Fenwick, who had a most miraculous escape, being blown through the side of the breaker, is resting very comfortably, and yesterday was sitting up and telling visitors the story of the disaster. His head and the backs of his hands are severely burned. A rumor was current yesterday that he had died. The Hungarian laborer, John Molosky, is not seriously hurt. / The Whittington boy was buried this afternoon from his home in the ‘patch,’ about a mile above the breaker. The Thomas boy will be buried to-morrow, services to be held at the house in Simpson at half-past eleven. The remains will be taken at noon to The Ridge, below Jermyn, for burial, where a short service will be held in Welsh before interment. The Ross boys will be buried to-morrow afternoon; services at the house above the Grove Hotel at 2. / Mrs. Whittington and Mrs. Ross are prostrated by the

shock and grief. Since the accident Mrs. Whittington has been in a constant state of convulsion and nervous prostration and Mrs. Ross is so ill that Dr. Jenkins was sent for this morning. / Crowds visited the scene of the disaster all day yesterday, and Supt. Crawford was up, making arrangements for the proper care of the dead and injured. The causes attributed for the accident are numerous, but the real reason is yet far from being obtained. Nothing but an investigation by the Coroner will be safe to depend on, but an examination of the boiler yesterday gave unmistakable evidence that the boilers were dry, pieces showing that it had been badly burned by the fire under them. A report was current yesterday that the boilers had been condemned only a week ago, but the injured Mr. Ross, who was outside foreman and who ought to know, denies this emphatically and says that they were in good condition, as far as any one could see. / The cost of the accident to the company will not be less than five or six thousand dollars in actual damages and destruction, but the colliery will be thrown out of work for several weeks.” (*Carbondale Leader*, March 17, 1890, p. 4)

Stephen Stengo, a Pole, stabbed John Lucas and split John Kescha’s head open with a stick at Johnson’s patch on August 17, 1892. On September 2, Stengo was arrested near the Northwest colliery above Carbondale by Special Officer Samuel Joseph and Constable J. W. Clark. He was taken to Scranton and given a hearing before Alderman De Long, who committed him to the county jail in default of \$1,500 bail. More details on this incident/arrest are presented in the following article that was published in the *Carbondale Leader*, September 3, 1892, p. 2:

“MURDEROUS POLE CAUGHT. / Overtaken Near the Northwest Colliery by Two Officers. / Two officers of the law, both strangers, with a prisoner, securely manacled, were at the Valley house on Dundaff street yesterday afternoon. A reporter of THE LEADER made an effort to learn something concerning the arrest, but the officers refused to give any information whatever. This morning’s Scranton Tribune says: Stephen Stengo, the Polander, who stabbed John Lucas and split John Kescha’s head open with a stick at Johnson’s patch on Aug. 17, was arrested near the Northwest colliery above Carbondale yesterday by Special Officer Samuel Joseph and Constable J. W. Clark. After the commission of his crimes Stengo left the city and the officers have since been searching for him. / Stengo was employed in the Northwest mine and the officers went after him. He received word that he was wanted and came out. A few minutes later the officers again emerged into daylight. / The man they were pursuing had a good start on them, but they boarded a small locomotive used in pulling coal from the mines and in a few minutes Stengo had been overtaken and handcuffed / He was taken to Scranton and given a hearing before Alderman De Long, who committed him to the county jail in default of \$1,500 bail. / Stengo at the hearing, swore out a warrant for the arrest of Lucas on a charge of assault and battery, and the latter furnished \$100 bail for his appearance at court.” (*Carbondale Leader*, September 3, 1892, p. 2)

On Saturday, September 29, 1894, at 10:05 P.M., four miners who had been trapped underground for sixty hours at the Northwest Colliery were rescued. Here are the details on this amazing rescue that were published in a Carbondale newspaper, most probably the *Carbondale Leader*, on Monday, October 1, 1894:

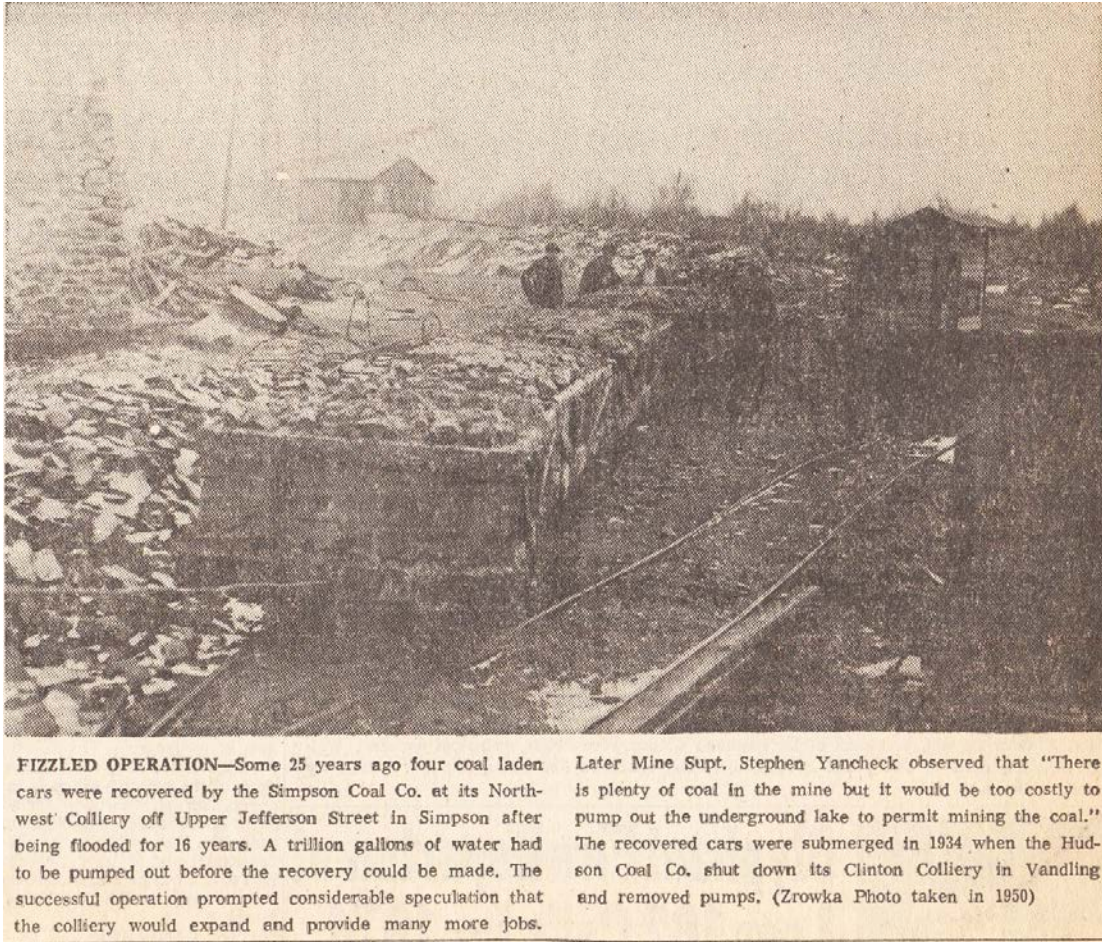
“MR. MITCHELL’S STORY. /HOW IT FEELS TO BE IMPRISONED IN A COAL MINE. / ALL THE MEN RESCUED. / One of Them Tells a Reporter What They Did While Waiting for Freedom—They Thought it Was Friday When They Were Taken From the Mine. / ‘Out of the jaws of death’ is the best short description of the rescue of the four miners who were for about sixty hours buried in the bowels of the earth at the Northwest colliery. The happy news of their release from what seemed their death chamber was flashed from lip to lip at 10:05 on Saturday night and the people assembled within and around the mouth of the mines almost hugged each other for joy. It was exactly five minutes past ten when William McCool, the head man of the party of rescuers, passed his arm through the first aperture into the chamber where the men lay and grasped the hand of William T. Mitchell and then the others of the imprisoned men. / Mr. McCool is a young man who is not employed in the mine but is engineer on the outside. Like several others he took his life in his hands and volunteered to enter the slope and work for the rescue of the unfortunate men whom death stared in the face, and it is hardly to be doubted that that hand grasp with the saved miners was ample payment for all the time and energy he expended. All honor to these men whose heroic work enables this glad story to be told in place of the sad story expected. /**IT WAS HARD WORK. /** Harry Simpson described the process of digging the entombed men out about as follows: Seventy feet of the 107 foot channel is two feet wide by two feet eight inches high. There was room for but one man to work on the face. He lay on his stomach as did the fourteen others of the shift behind him. As he passed the rock off it was passed the next man behind him, who in turn passed it on until it reached the large gangway. This was a slow process, but faster than any other known. / Three shifts of fifteen men each were engaged on the job. They shifted every eight hours. Mine foreman J. W. White and his assistant, William Robinson ‘spelled’ each other every twelve hours. Assistant superintendent Shepherd, of the company was on the scene continuously since the accident occurred and had no sleep. / The fall of rock was much more extensive than was at first supposed, being over 100 feet, and in order to reach the open portion of the gangway the men will be obliged to crawl or hunch along the greater part of that distance. / **RELATED A THRILLING EXPERIENCE. /** Superintendent White related to the reporter a thrilling experience had by himself and foreman Jenkins. Mr. White being thoroughly acquainted with the workings, took a circuitous route through an old chamber in hopes of reaching the men or their bodies by that route. After traversing some distance in the abandoned workings they came upon the fall. This they cambered over with the utmost difficulty. The opening between the rock and the roof above them was barely eighteen inches, yet they laboriously worked their way for nearly one hundred feet, by crawling through. Many of the places were scarcely high enough to admit their bodies, yet they worked heroically on until they reached the objective point only to find that it, too, had been affected by the fall. They then worked their way back to the opening, and

decided to continue the course originally begun for the relief of their unfortunate comrades. The position of Mr. White and his companions was certainly an unenviable one, as the overhanging rock was liable to come down at any instant without the least warning. / STORY OF THE RESCUE. / Surrounded by his family and a number of friends at his home in Simpson William Mitchell told the story of the imprisoned men to a *Leader* reporter. One of those who listened was Mitchell's twelve-year old boy who had stood at the mouth of the mine since the cave-in with almost no food or rest until the rescue was announced. As his father related his experience to the reporter tears welled up into the boy's eyes and his emotions overcame him so that he left the room. / 'We had nothing of course, while we were imprisoned,' said Mr. Mitchell, 'and I took only one drink of the mine water, the Hungarians not touching the water at all. I scraped out the earth and made a pool into which the water dripped, placing two large stones either side so that we could find it. / 'When we were rescued on Saturday night we thought it was Friday. None of us had time pieces, having left everything outside. When the fall began we were covered with perspiration; and the excitement following made us sweat all the harder, so that after we were driven back we huddled together and shivered like a lot of drowning rats. We couldn't stand up, and had to lie on the ground and suffer not only mental agonies but physical distress. / 'We didn't feel the lack of food, for we were all too much worried to have appetites. I can't describe my sensations. We didn't give up hope until the second fall came, and as for myself I felt no fear; I could only lie there and pray, and think of my wife and six children at home. I tell you it was music in our ears when we heard the voices of the workers. / We hadn't a moment's warning when the fall came, but the great mass of roof fell obliquely and drove us back, shoving the props out as if they had been so many straws. It was an overwhelming mass and we were almost blown off our feet by the gust of wind it generated. I had an iron drill in my hand the force of the wind was so great that it was blown out of my grasp and I never found it afterward. / I don't remember whether I slept or not, but I think not. My mind was too much occupied with thoughts of my family. Neither can I describe my feelings when I was taken out. I was too full of gratitude to everybody to think. / Mr. Fanning, one of the rescued, went to Pittston yesterday to visit friends. The two Hungarians celebrated with their friends by tapping a keg of beer. / While the rescuers were at work in the mine Dr. Bailey was present to attend to the men in case they needed medical or surgical aid when found. There was an ambulance in waiting and a wagon filled with provisions, and all the things required for the comfort of the rescued men. J. G. Shepherd, assistant superintendent, J. L. Crawford, general superintendent, and mine inspector Roderick were on the ground in the afternoon waiting patiently for the recovery of the unhappy men. / The diagram [of the ground plan of the mine; not reproduced here] given herewith appeared in this morning's *Scranton Times*." (clipping, probably from the *Carbondale Leader*, in the Gritman scrapbook, dated Monday, October 1, 1894)

In 1916, the Sterrick Coal Company owned the Northwest Colliery. In the breaker there the larger sizes of coal were prepared dry, while the smaller sizes were treated wet in the washery, which obtained its wash water from the Lackawanna River. Connected to the breaker was the

washery where the material from the culm bank farther down the river was prepared, as well as the small sizes of fresh mined coal.

The following photograph with caption was published in *The Scrantonian*, Sunday, February 16, 1975, p. 28:



From the above clipping we learn that in 1950:

- the Simpson Coal Company owned the Northwest Colliery, which was located off Upper Jefferson Street, Simpson
- the mine superintendent was Stephen Yancheck
- the Simpson Coal Company pumped a trillion gallons of water out of its mines at the Northwest Colliery and recovered four cars laden with coal which had been submerged in the mines there for 16 years'

- the Clinton Colliery in Vandling, which was owned by the Hudson Coal Company, was shut down in 1934. With that closing and the removal of the pumps there, the mines at the Northwest Colliery were flooded.

Simpson/Monkey Run Park

At Main Street and the intersection of Jefferson Street in Simpson, there is a triangular-shaped park that has been named *Monkey Run Park*. On the upper portion of this piece of land, the Washington School one stood. Here is a photograph of the Washington School; photo in the collection of the Carbondale Historical Society.



The author of the present volume attended Fourth Grade in this school. At the time, the Fourth Grade classroom was on the first floor.

Washington School, Monkey Run Park, Simpson, PA

On January 10, 2011, we spoke with Michael J. Yavorosky, Hop Bottom, PA, who was born and raised in Simpson, and asked him what he knew about Monkey Run Park and its name. He said that “the person most responsible for Monkey Run Park was Mike Mikulak, who lived in that vicinity (he died a few years ago at the age of about 100; he was born in Old Slope). Discussion at the time was for the school district to sell the lot for housing. Mike initiated the idea that it should become a public park. I believe that he was also responsible for proposing the name.”

Stephen “Cy” Voyce (son of John and Mary Ohotniky Voyce), a lifelong resident of Simpson, died on Sunday May 22, 2011, at the age of 90. He was a graduate of Fell High School, a Fell Township school director for 18 years, and chairman of the Simpson Democratic Party. In his obituary, published in the May 23, 2011 issue of the *Scranton Times*, we read: “Cy founded and developed Monkey Run Park in Simpson.”

Mike Mikulak or Cy Voyce: Which one was it who founded Monkey Run Park? It was probably a joint effort. Whatever the case, it’s good that Monkey Run Park was established.

We asked Michael Yavorosky about the name “Monkey Run”: Was it a nickname for a section of Simpson? All of Simpson?

Michael Yavorosky: “I don’t know to what the name refers. But I do know that there were three ‘villages’ near the Northwest breaker. One was Old Slope (the old mine). The other was Swamp Hollow [where Michael Yavorosky was raised], and the third, apparently unknown to everyone except me—and now you—was the village of Hollenbank, which was east of the breaker and was settled before the breaker was built. The entire village burned to the ground. I never heard anyone refer to these places as Monkey Run.”

On the map given above on page 277, a map showing the route of the O&W from Carbondale to Forest City, as well as lot of very precise data on the location of several breakers between those two points, the community of Hallenbeck’s is shown, east of the Northwest Breaker. This is surely the village of “Hollenbank” to which Michael Yavorosky was referring. The Scranton Division of the O&W, which passed through this area, opened in 1890, and Hollenbeck’s was, it appears, a designated station stop.

The earliest reference in print to Monkey Run that we have been able to locate is in the article, "Orange Blossoms at Monkey Run," that was published in the October 1, 1899 issue of the *Carbondale Leader*, p. 4. That article is about the marriage of John Williams and Annie Whitehead on September 30, 1899, which took place "at the home of John W. Phillips of Monkey Run." Here is that article:

"John Williams and Annie Whitehead applied to Alderman Thompson for a marriage license on Friday and made extensive preparations for a wedding on Saturday night. John purchased two kegs of the popular beverage and several bottles of another kind and Annie looked after the substantial refreshments. Saturday evening the young couple appeared at the office all ready to have the ceremony performed that should make them one, but the squire informed them that the permit had not arrived and the 'event' would have to be postponed until he received the paper. The young people manifested their disappointment in the usual way and the squire was at a loss to know what to say to them. / Annie was the first to recover from the shock and the squire assured her that he would have license in time to tie the knot on Monday evening. Early last evening John and Annie returned and the alderman spoke the words both were so anxious to hear. The event was duly celebrated at the home of John W. Phillips of Monkey Run, and the young couple will commence life in the village of Simpson some time this week."

"Monkey Run" was the popular name for the Hungarian community at the Northwest Breaker. That we know from the article, given below, about a free-for-all that took place in a boarding house at Monkey Run on the evening of November 13, 1890. In that article about the free fight in question, two statements by the journalist who covered the story for the *Carbondale Leader* are central to our determination that the name "Monkey Run" was the popular name for the Hungarian community at the Northwest Breaker. Here are those statements:

"The Hungarians at the Northwest had a time among themselves last evening. . ." (emphasis added)

"...when he returned to his boarding house at Monkey Run every Hun in the colony was asked to pass their opinion on Joseph's purchase..." (emphasis added)

Here is the complete article about this free for all at Monkey Run over the question of the authenticity of a scarp pin that was purchased by Joseph Solnofsky:

"FREE FIGHT AT MONKEY RUN. / An Innocent Scarf Pin Creates a Terrible Row. / The Hungarians at the Northwest had a time among themselves last evening and the fellows who caused the trouble in the colony will be summoned to appear before Alderman Thompson this evening and be asked to settle for the damage done. The prosecutor who called at the Alderman's office this morning and procured warrants for the arrest of his countrymen is known by the euphonious name of Joseph Solnofsky. Yesterday morning he came to town and proceeded to

invest his surplus earnings for October in jewelry. / Among other things, he purchased a very showy scarf pin, and when he returned to his boarding house at Monkey Run every Hun in the colony was asked to pass their opinion on Joseph's purchase. The Huns were divided in their opinion as to the value of the ornament, and a majority of the colonists declared that the yankee had cheated Joseph. One of the Huns declared that he knew of a test by which the value of the pin could be determined and Joseph was prevailed upon to take the ornament from his scarf and turn it over the assayer of precious metals. / While the Huns awaited the result of the test Joseph invited them to partake of some liquid refreshment, and an hour was given up to the pastime. The re-appearance of the assayer put a stop to the carousing, but when he announced that the jewel had failed to stand the test, a howl went up that fairly shook the building. Joseph demanded the return of his property and the assayer coolly informed him that the scarf pin has passed off in vapor and that the greatest scientist in the world could not put the fragments together. / Joseph flew into a passion and struck the assayer a terrific blow and that was the beginning of a free fight that was kept up for nearly an hour. Joseph looked as if he had been run through a threshing machine when the struggle ended, but the man who knew how to test gold and silver managed to escape a serious punishment and Joseph is quite positive that he carried the scarf pin in his pocket when he left the boarding house." (*Carbondale Leader*, November 14, 1890, p. 3)

Remarkably, in 1892 the Carbondale Presbyterians established a new church at Monkey Run. That we know from the following article that was published in the October 24, 1892 issue of the *Carbondale Leader*:

"While the Presbyterians have built a new church at Monkey Run as a branch to the Carbondale church it is understood that the Methodist church of Carbondale has thrown off the little flock at No. 4, to shift for themselves, there not being money enough to entice them up this way." (*Carbondale Leader*, October 24, 1892, p. 4)

Monkey Run Park, at the intersection of Main Street and Jefferson Street in Simpson, therefore, is a park that was established, thanks to the efforts of Mike Mikulak and Cy Voyce, in memory of the Hungarian community at the Northwest Breaker (which was not located in Monkey Run Park).

Here are some photographs that were taken by the author on September 4, 2013, in the course of a walk with Ed Hodorawis at the Northwest Breaker site. The exact nature of these ruins has not yet been learned.

At Northwest Breaker site:



At Northwest Breaker site:



At Northwest Breaker site:



At Northwest Breaker site:



At Northwest Breaker site: Possibly a rail line at one point?



At Northwest Breaker site: Possibly a rail line at one point?



Mine, entrance closed, not far from Old Slope:



Mine, entrance closed, not far from Old Slope:



Coal vein in mine shown on the preceding page:

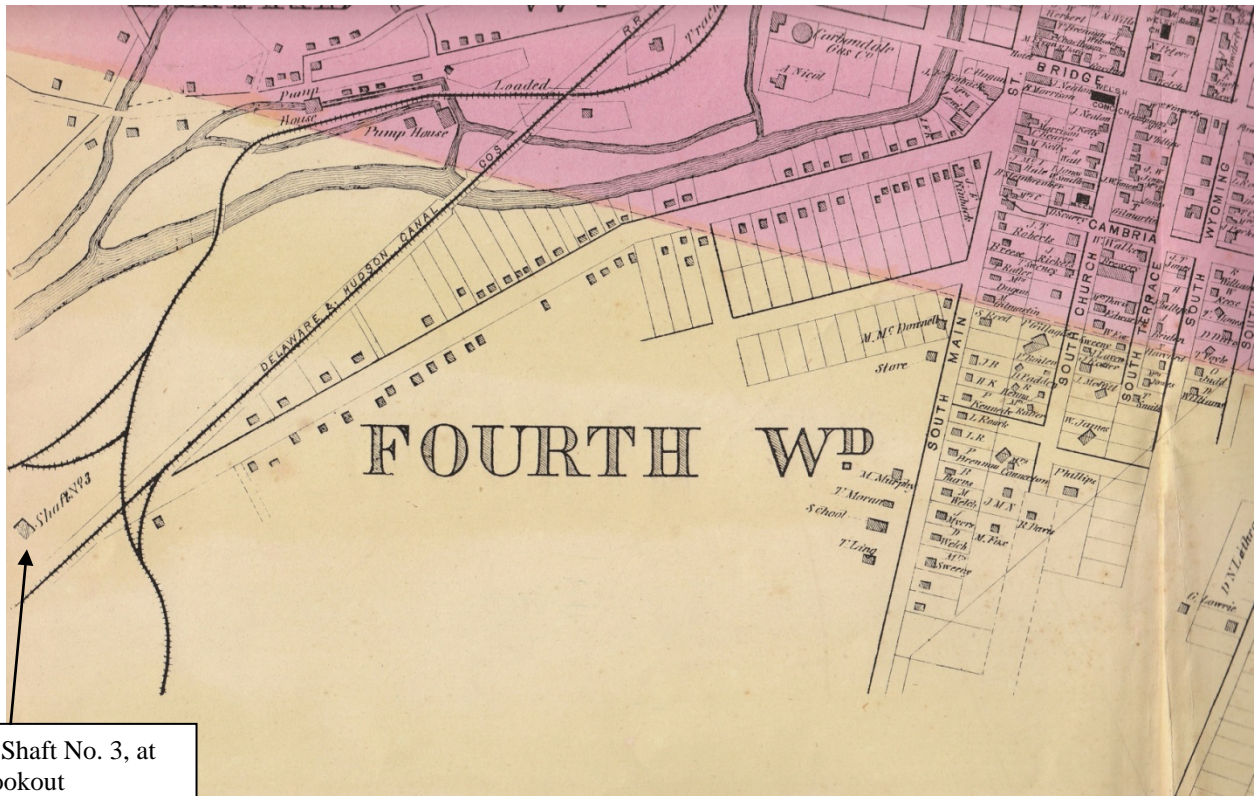


1887

Number 1 and Number 3 Shafts

Shown on the map given below from *D&H Deeds Luzerne I*, p. 14 are Number 1 Shaft and No. 3 Shaft. Also shown on this map is Stott's Mine. This is a detail of a map that illustrates a deed, dated November 1, 1825, pp. 15-16, between John Wurts and The Delaware & Hudson Canal Company.

D&H Shaft No. 3 is also shown on the detail given below from the 1873 *D. G. Beers map of Carbondale*:



D&H Shaft No. 3, at the Lookout

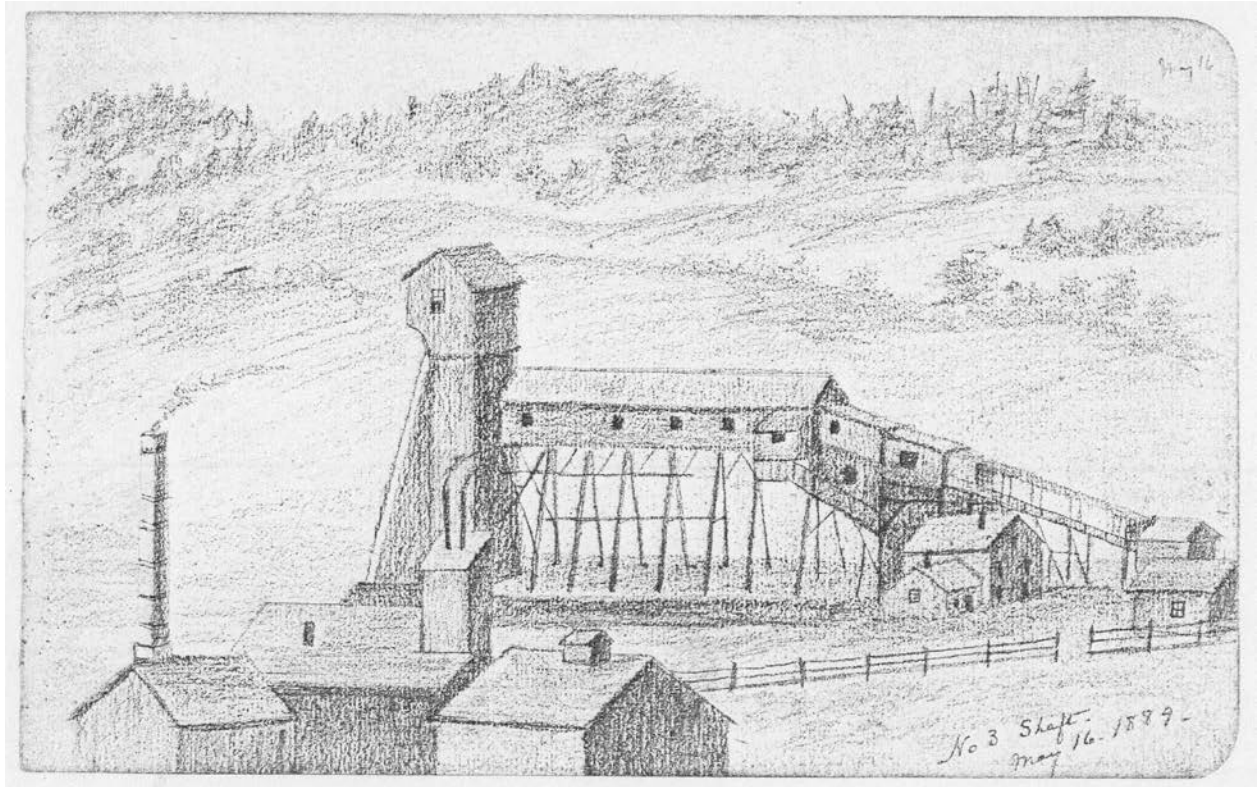
"D & H Old #3 Shaft" is shown on the Map of the City of Carbondale Lackawanna County, Pennsylvania 1909, From Actual Surveys By and Under the Direction of William Tappan:



Lackawanna River

"D & H Old #3 Shaft" on Pike Street at the Lookout

Shown below is the “No. 3 Shaft – May 16, 1889” from the M. B. Ricker sketch book titled “Carbondale Sketches – Summer of 1889 M. B. Ricker,” in the collection of the Russell Homestead, Carbondale.



No. 1 Shaft

No. 1 Shaft of the D. & H. C. Co. was near the White Bridge. Fall Brook levels 1, 2 and 3 were opened in 1846 and abandoned about 1857. The coal from those levels was worked from the 'White Bridge' tunnel and hoisted at No. 1 plane. The 'White Bridge' was begun in 1865.

On August 6, 1870, Mrs. John Fleming was run over and killed by loaded Gravity Railroad cars on Level No. 27 near No. 1 shaft. The following account of the accident was published in the *Carbondale Advance* of August 13, 1870:

"Another Fatal Accident. / An aged lady, wife of Mr. John Fleming, was run over by a train of loaded coal cars, near No. 1 Shaft, while she was walking on the track, on Saturday afternoon last. She was nearly deaf and unable to hear the approaching train. On this account all efforts to alarm her, and get her off the track, proved unavailing. She lived but about an hour." (*Carbondale Advance*, August 13, 1870, p. 3)

No. 1 Shaft was one of the D&H mining operations that was shut down in December 1873 by the D&H because the lot holders on D&H lands would not sign leases on the properties in question (see Volume XIII in this series). As a part of those D&H shut down operations, we learn from the article on the question that was published in the December 20, 1873 issue of the *Carbondale Leader*, the entrance to the White Bridge Tunnel was boarded up and no one was permitted to enter:

“The mines in this vicinity, owned by the D. & H. C. Co., are all idle at present, and will likely remain so for some time to come. The White Bridge Tunnel has been boarded up at the entrance and no one is permitted to enter. The huge Lackawanna breaker—said to be the largest breaker in the world—stands grim and silent and deserted, like a dark sentinel at the entrance to the mines. No sounds of busy industry now issue from its blackened inclosure, and the giant structure which, but a short time since, prepared over a thousand tons of coal per day, is now having its winter vacation, to last—no one seems to know how long. The hundreds of willing workers would return to their labors at once, provided the question of leases could be satisfactorily settled; but the present outlook doesn’t seem to favor an early resumption of mining here. The few private mines we have are all working as usual.” (*Carbondale Leader*, December 20, 1873, p. 3)]

In January 1877, half time was the order of the day in all Delaware and Hudson Canal Company mines in the Carbondale area. In the *Carbondale Leader* of January 6, 1877, we read:

“Half time is now the order of the day in the D. & H. C. Co.’s mines in this vicinity. All the mines, we believe, are now in operation on half time. As stated in these columns last week the men at the Lackawanna mines were permitted to try to make full time for three or four days during the last of the month. It was not supposed that this order of things would continue very long, and it did not. If the men were assured that they will be allowed to work steadily all winter even on half-time, they will be enabled to prepare to govern themselves accordingly, and will know how to manage their personal matters during that time. But as we have frequently remarked before, there is not the least certainty as to how long they will be given a chance to work on half time. There is a liability that a suspension, brief though it may be, will occur at a day’s notice, and that all the works will be stopped without any note of warning. There have been so many of these within the past year or two that it is utterly futile to predict what course these mining concerns will take in the future, or how much or how little work they will give the men who rely on working the mines for their and their families’ daily bread. We hope that the laboring men may be kept constantly employed throughout the winter, that they may receive good wages, and that thereby they may be able to keep themselves and their families from want and starvation.” (*Carbondale Leader*, January 6, 1877, p. 3)

In the *Reports of the Inspectors of Mines*, 1877, we find the following accident reports for No. 1 Shaft, Carbondale City:

July 25, Dominick Lacken, age 14, was in a non-fatal accident (arm broken in two places by falling under a trip of mine cars) at No. 1 shaft, Carbondale City.

November 8, Thomas Wayman, age 15, was in a non-fatal accident (legs badly injured by mine car tipping over on him) at No. 1 shaft, Carbondale City.

November 30, Michael Galagher, age 40, married with 4 children, was in a non-fatal accident (body badly bruised by a fall of roof) at No. 1 shaft, Carbondale City.

December 12, Martin Haley, age 25, was in a non-fatal accident (thumb cut off by a piece of coal which he was lifting into a car) at No. 1 shaft, Carbondale City.

On April 15, 1879, Thomas Cannon was hit on the head with a large rail in No. 1 Shaft. He was not expected to survive. From the accident report that was published in the *Carbondale Advance* of April 19, 1879, we learn that the accident took place while Cannon was working on the night shift. The fact that *night shift* is given in quotation marks in the article in the *Carbondale Advance* suggests that *night shift* may well have been a new term in the language at the time. Here is that report:

"Injured in the Mines. / A young man named Thomas Cannon met with a very serious and probably fatal accident in No. 1 shaft, of the D. & H. C. Co., on Tuesday night. He was hit on the head with a large rail while working on the "night shift." (*Carbondale Advance*, April 19, 1879, p. 3)

We learn, from *1880* (p. 452C), that MICHAEL GARVEY began work for the Delaware and Hudson Canal Company in 1859, and that in 1871 he started to work at wheelman at shaft No. 1. Garvey was born March 29th, 1846, at Carbondale, where he married Bridget Duffy.

The output of coal at No. 1 Shaft, Carbondale for 1881 was 25,923.09 tons, No. 1 Shaft worked, 231 $\frac{3}{4}$ days in 1881.

On January 3, 1881, Barney Gaffney and John McDonald were killed in the White Bridge Mine by a mass of falling rock. Here are the details on this accident as reported in the *Carbondale Leader* of January 8, 1881:

"A DISTRESSING ACCIDENT. / As a rule, the mines about Carbondale are singularly free from accidents and it is seldom the lot of a journalist in this city to record any occasioning loss of life. One of these unfortunate occurrences took place on Monday in the White Bridge mine when two men were crushed under a mass of falling rock. Barney Gaffney and John McDonald, the victims of the accident, and a helper also named McDonald were working in a chamber together. The last named was told to take the tools to a safe place while the others prepared to let the top coal down, and it was while he was gone that the accident occurred, burying the two men under a pile of splintered rock thirty feet across the chamber, forty feet the other way, and about three feet in thickness. Some of the slabs were ten feet across and might be any thickness from six inches to two feet. A gang of men worked with a will to release their fellow workmen as soon as it became known that they had met this horrible fate, and the bodies were found in about two hours. Both the bodies were much bruised, especially in the head and back, and it is not doubted that their death was as sudden as the disaster itself. The accident was of a peculiar nature and could not have happened in any other mine in Carbondale. This is the only mine in which the veins of coal are worked after the plan in use in it. There are two veins, each about six feet in thickness which are separated by about thirty inches of slaty rock. By working the bottom vein first and after the chambers are worked to their full extent letting the roof come down and then working the top vein greatly simplifies the process of getting the coal out and makes it much easier for the miners. That it is also much more dangerous the result of this accident has shown. As the miners blast their way through the lower vein, they put up timber props at intervals to support the rock layer above them. When they get ready to work the top coal on the return, the props nearest the head of the chamber are chopped until they are nearly ready to break in two. One of the men will then throw a steel bar used as a drill at the weakened prop and spring back to get out of danger. It usually happens; that the rock comes down from its own weight with a crash. Sometimes it is held fast by the coal above and a hole has to be drilled in it in that case, and the mass loosened by a charge of powder. It is always a matter of uncertainty whether the fall will be instantaneous or not, and as the props are weakened one after the other until the required surface is prepared for the fall, the work becomes very trying to the nerves. Gaffney was last seen in the act of throwing the drill. McDonald was just behind him, and whether they collided and thus were unable to get out of the way is not known, but it furnishes a probable explanation of the accident. It is thought, too, that more of the roof fell than was expected. / Both of the deceased leave bereaved families,--Gaffney a large one. Their funerals took place on Wednesday afternoon at half-past three from the Catholic church and were largely attended. The funeral from the church to the new cemetery was a joint one. The Fagan Guards out of respect to Gaffney attended in uniform; the Father Mathew society also assembled in a body in honor of their late member, McDonald. The procession was unusually long." (*Carbondale Leader*, January 8, 1881, p. 2)

On Friday, April 21, 1882, Daniel Farrell fell twenty-five feet from a trestle at No. 1 Shaft, and fractured two ribs, one of which punctured his left lung. A complete recovery from the accident was expected. In the *Carbondale Advance* of April 22, 1882, we read:

"Seriously Injured. / On last Friday afternoon Mr. Daniel Farrell, one of our most respected citizens, met with a serious injury at No. 1 Shaft. He had occasion to go there for powder, which is given out to the miners at a certain hour in the afternoon, and had walked up a trestling about twenty-five feet high, to the room in which the powder is kept. The trestling is surmounted by a guard-rail, which was broken off some days before, and replaced, but not secured. As a trip of cars was coming up the plane, he stepped from the track to lean against the rail, which gave way, and he was precipitated to the ground. / He was removed to his home as quickly as possible, and Dr. Burnett summoned, who found that two of his ribs were fractured, and the left lung punctured by one of the broken ribs. / Mr. Farrell is as comfortable as can be expected, and his recovery is expected in a short time." (*Carbondale Advance*, April 22, 1882, p. 3)

On April 19, 1886, a fire was accidentally started early in the morning in the mine near No. 1 Shaft when a wick was thrown carelessly away. The miners were sent home early in the morning. The fire was extinguished by noon. In the *Carbondale Leader* of April 20, 1886, we read:

"Fire in the Mines at No. 1. / People in the vicinity of No. 1 Shaft of the D. & H. C. Co. near the White Bridge were surprised yesterday to see the miners going home early in the morning. It was learned that the mine was on fire, and within a short time several stories of trouble with the men were afloat—one to the effect that several men had gone into the mine and ignited it. These were not true, however. The real cause of the fire is not known but it is supposed to have been a wick thrown carelessly away. It was extinguished by noon yesterday without serious damage resulting." (*Carbondale Leader*, April 20, 1886, p. 4)

On July 14, 1886, seventy driver boys at No. 1 Shaft struck, alleging that they were not getting pay for all the time they put in. The following article about this job action on the part of the driver boys was published in the July 23, 1886 issue of the *Carbondale Leader*:

"STRIKE AT No. 1 SHAFT. / Seventy Drivers Quit Work for More Pay or Less Time. / About seventy driver boys at No. 1 shaft of the D. & H. C. Co., below the city, struck on Wednesday and gave as a reason for quitting work that they were not getting pay for all the time put in by them. They have been drawing half-time wages and have been working nearly three-quarters time. This is the way they put it. An official of the company when seen by a reporter claimed that no injustice was being done the boys. It is the old case of 'give a person an inch and he'll take an ell.' The drivers have until lately worked less than four hours and have drawn wages for half a day, and now that they are required to fill in the full five hours for half day, imagine that they are being trod upon, whereas they are just earning their wages. / The strikers have not yet returned to work and evidently think their grievance is severe enough to demand a holding out for some time. The official referred to stated that not the least trouble would be experienced by the company and the boys ought to be wise enough to see this for in these days labor is easily

obtained and their places can be filled in a short time, or in case of failure to readily do that the works can be shut down and the coal can be mined and prepared at other collieries, none of which are crowded with work. / A similar strike took place at the Coal Brook mine not long ago but after being out about six hours the boys took a sober second thought and returned to work in a body. This, it is thought, will be the outcome of the present trouble.” (*Carbondale Leader*, July 23, 1886, p. 4)

A presentation of the facts in the strike of the driver boys at No. 1 shaft on July 14, 1886 (see above) is given in a “Letter to the Editor” of the *Carbondale Leader* from ONE OF THE BOYS’ FRIENDS, which was published in the *Carbondale Leader* of July 30, 1886, as follows:

“Mine Boys Vindicated. / *To the Editor of the Leader:* / In your issue of the 27th inst. [see above] there appeared an item entitled, ‘The Situation at No. 1 Shaft,’ wherein the facts have not been correctly represented. The driver boys did not ‘refuse to work on anything but their own terms.’ The facts in the case are simply these: The driver boys as a general rule, have been paid for ‘getting out the coal,’ which means taking out of each chamber or breast the requisite number of cars which constitute a day’s work in those places. In this the drivers have never been restricted to time; if they could get ‘full coal’ out in four hours, they were paid for a full day’s work. If through unavoidable delays it should take eleven hours they got but a day. This, all who have worked in or around the mines, know to be customary. Here is where the trouble originated. The miners had made fourteen days and some a few cars over. The boys were paid, some for eleven and a half and others for twelve days’ work only, when they had earned fourteen. This was the driver boys’ reason for stopping work. Is this just? The drivers must be at work in the mine by half past six in the morning, and work until half past one or two in the afternoon, for a half a day’s work. Inside and outside company men must work from seven a. m., until the same time after dinner for a half day’s pay. They dare not remonstrate, should they murmur the answer is, ‘If you don’t like it you can go home.’ Is this justice? The drivers went home and selected a committee to see Superintendent Vandling. The mine ‘boss’ tried to compel other persons to take the mules and drive. The result was some refused and some complied. Those who refused were told to go home, that their services were not needed for some time. The others who took the mules left them afterwards to straggle through the mine. The drivers’ committee who went to see Mr. Vandling returned with the promise that they should be paid for their time, and that he was not aware of such treatment as they complained of. / Meantime the mine boss locked the mine door, and would not allow men who wished to take their tools out to go in and get them. When the drivers’ committee came back from Providence the mine-door was still locked. This is the undeniable fact. More than this, the men and boys so locked out, tried to get work at other places, but would not be allowed to work at any other D. & H. mine in this vicinity. Boycotting them in their efforts to work where they could obtain employment, another instance of understrappers’ justice. Finally the men held a meeting and appointed a committee to see Mr. Vandling again,

and acquaint him of the true state of affairs. They waited on him on that (Monday) evening, 26th inst. Having heard from the men who were sent to see him, the truth of the grievance complained of, he ordered an immediate resumption of work, and now the miners and boys are at their usual occupations and are likely to remain so, unless an ambitious boss again tries to curtail their rights, and show what a good man he is for the company's interests and thereby build himself up in the estimation of the higher officials, at the expense of those who labor. The people of the present day are too well enlightened to quietly submit to such flagrant violations of justice, and we are pleased to see that the rising generation had the fortitude and manliness, although boys, to resent the injustice done them. The men and boys demand this statement. Hereafter we will see that you get true facts in all cases of this kind. An injury to one is the concern of all. / ONE OF THE BOYS' FRIENDS." (*Carbondale Leader*, July 30, 1886, p. 4)

In presenting "the facts" in that letter, the writer of that "Letter to the Editor" states some very interesting facts about work requirements and procedures in the mines that we have never seen anywhere in print. He states:

1. "The driver boys as a general rule, have been paid for 'getting out the coal,' which means taking out of each chamber or breast the requisite number of cars which constitute a day's work in those places. In this the drivers have never been restricted to time; if they could get 'full coal' out in four hours, they were paid for a full day's work. If through unavoidable delays it should take eleven hours they got but a day. This, all who have worked in or around the mines, know to be customary."

2. "The miners had made fourteen days and some a few cars over. The boys were paid, some for eleven and a half and others for twelve days' work only, when they had earned fourteen. This was the driver boys' reason for stopping work." In other words: If the miners were paid for fourteen days work, the driver boys should have been paid for fourteen days work.

3. "The drivers must be at work in the mine by half past six in the morning, and work until half past one or two in the afternoon, for a half a day's work."

4. "Inside and outside company men must work from seven a. m., until the same time [half past one or two in the afternoon] after dinner for a half day's pay."

On Saturday, October 16, 1886, James Toolan was severely injured at No. 1 Shaft by a fall of coal from the upper, or fourteen-inch, vein there. In *The Journal* of October 21, 1886, we read:

"James Toolan, a miner employed at No.1 Shaft, was severely injured by a fall of coal on Saturday morning. He was working the three foot vein, when the fall occurred from the upper or

fourteen inch vein. His foot was badly lacerated and crushed, and his face severely cut.” (*The Journal*, October 21, 1886, p. 3)

Two serious accidents in the mines on July 6, 1891, were reported in the *Carbondale Leader* of July 7, 1891: in the one Alexander Travis was badly hurt by flying pieces of coal when a blast from an adjoining chamber broke through into the chamber where Travis was working (a ‘blow through’) and struck him; in the other, Isaac Reese, a miner employed in the New York and Scranton Coal Company’s mine, at Peckville, was killed by a fall of what is known as fire clay. Here is that report:

“ACCIDENTS IN THE MINES. / Falls from the Roof Injure One Man and Kill Another. / Alexander Travis, of Spring street, sustained severe injuries while at his work yesterday afternoon in No. 1 shaft, the Delaware & Hudson colliery in the southwest part of the city. The men in the chamber adjoining the one in which Travis was working fired a blast which broke through the pillar separating the chambers, and Travis happened to be in line with the hole when the blast was fired and was struck by the flying pieces of coal, while some of the large pieces caught and held him securely. / When his companions released him it was found that his left leg was broken near the ankle. None of the cuts which he received were thought to be serious although the wounds bled pretty freely. He was taken to the mouth of the mine and removed to his home. / Isaac Reese, a miner employed in the New York and Scranton Coal Company’s mine, at Peckville, was killed yesterday morning, while at work, by a fall of what is known as fire clay. Mr. Reese was assisted by a laborer, and was in a stooping position with his back turned toward the opening of the chamber. Without any warning a portion of the roof came down with a crash, striking him directly on the small of the back. / The force of the fall threw him upon his head against the side of the chamber and lacerated his face severely. A deep gash was made in his head, partially fracturing the skull and otherwise badly injuring him. He was rendered unconscious and lived for a few hours. His laborer, hearing the report of the fall, jumped back in time to save himself.” (*Carbondale Leader*, July 7, 1891, p. 3)

Most interestingly, the cause of the serious injury to Alexander Travis in Number 1 Shaft on July 6, 1891, a “blow through,” was the cause of the accident that took place on January 5, 1888, at the Northwest Colliery in which Andrew Oudko and Andrew Stupho, both Hungarians, were injured (see that accident report above, p. 283).

On the afternoon of August 27, 1892, James Lavelle, age 21, of Pike Street, Carbondale, was killed by a fall of the “fourteen inch” at No. 1 Shaft. In the *Carbondale Leader* of August 27, 1892, we read:

"HIS LIFE CRUSHED OUT. / James Lavelle Felled by a Slab of Rock in the Mines. / James Lavelle was fatally injured by a fall of roof coal in the Delaware & Hudson colliery known as No. 1 shaft shortly after one o'clock this afternoon. He was at work in the mine chamber when the part of the roof called by the miners 'fourteen inch' fell crushing him beneath its weight. The mass of coal was quickly removed but it was evident to the men that Lavelle's injuries were fatal. / He was taken to his home on Pike street and a doctor was summoned. The unfortunate man is the son of Austin Lavelle a well known resident of Pike street. This fourteen inch vein of coal, is left by the miners who work the lower vein in this locality, to strengthen the roof and is considered quite secure except where 'slips' occur in the workings." (*Carbondale Leader*, August 27, 1892, p. 4)

As the fall of coal was being removed from on top of Lavelle, we read in the *Carbondale Leader* of August 29, 1892, "the Rev. J. V. Hussie appeared upon the scene and there in that underground chamber, the roof working and cracking in the most threatening manner, the last sacrament of the Roman Catholic church was administered to the injured man." Here is the complete account of the accident from the *Carbondale Leader*:

"LAVELLE'S SAD DEATH. / The Last Sacrament Administered While He Was Under the Rock. / James Lavelle, the young man who was injured by a fall of roof at No. 1 shaft on Saturday afternoon, died at midnight of the same day from the injuries sustained. When the mass of coal that covered him was removed he was found on his knees his head resting on the rock that formed the floor of the chamber. While the men were at work removing the coal that covered him, Lavelle would occasionally speak to them, but soon after he was removed to his home he became unconscious and remained in a comatose condition until death ended his suffering. In the chamber at the time of the accident was Mark Atkinson, who fortunately escaped with a few slight bruises. He hurried to the adjoining chambers for help and very soon willing men were at work clearing away the mass of coal that covered the unfortunate miner. / The workmen quickly discovered that Lavelle was alive and they worked with all speed to rescue him. Twice while the rescuing party were at work great quantities of roof fell and it was found necessary to timber the chamber for their protection. It was fully three hours after the accident occurred before the unfortunate man was released. While the men were still at work the Rev. J. V. Hussie appeared upon the scene and there in that underground chamber, the roof working and cracking in the most threatening manner, the last sacrament of the Roman Catholic church was administered to the injured man. / James Lavelle was twenty-one years of age, unmarried and was highly respected by all who knew him. The funeral will take place from the residence of his father, Austin Lavelle, at 3 o'clock tomorrow afternoon. Interment in St. Rose cemetery." (*Carbondale Leader*, August 29, 1892, p. 4)

Highly significant changes in the D&H mining and railroad departments were announced in an article in the April 10, 1899 issue of the *Carbondale Leader*. From that article we learn the following facts:

- A new mine opening is to be made by the D&H in the vicinity of the upper Powderly mine and near No. 1 colliery
- The new opening will be in the nature of a slope, several hundred feet long, to reach the Rider vein of coal under the east mountain
- The Rider vein is known to contain ten feet of solid coal
- The contract to drive the slope will be awarded by the D&H on Saturday night, April 15, 1899, to Thomas Walsh and John McAndrew
- A trestling of some 600 feet in length will be constructed to connect the slope with No. 1 shutes
- The foreman at the Powderly mine is Mr. Jordan
- The construction of these new works will give the south side men full time for the entire summer and will materially assist in the industrial boom that the city is to have this season
- No. 3 colliery on the south side will be idle on April 10, 1899, as workmen put in an endless chain to facilitate the taking of cars out of the mine
- With the new endless chain in place, fifteen stations in the mine will be done away, which means that fifteen driver boys and fifteen mules will no longer be needed there
- With the new endless chain in place, the miners will no longer have to wait for the delivery and removal of cars
- April 11, 1899 will be pay day for the south side collieries

Here is the complete text of that remarkable article from the April 10, 1899 issue of the *Carbondale Leader*:

“BIG CHANGE IN THE MINES. / They Mean Full Time For the Men All Summer—New Opening To the Rider Vein. / This is a time of changes in this vicinity and there bids fair to be a complete transformation in the mining as well as the railroad department of the Delaware & Hudson company. / The latest announcement to be made is that a new mine opening is to be made in the vicinity of the upper Powderly mine and near No. 1 colliery. It will be in the nature of a slope to reach the ‘rider’ vein of coal under the east mountain. This vein is known to contain ten feet of solid coal and the slope to reach it will be several hundred feet long. The contract for driving the slope will be let on Saturday night to Thomas Walsh and John McAndrew. In addition to this there must also be erected a trestling of some 600 feet in length to connect with No. 1 shutes. The new slope will greatly relieve the crowded condition of the Powderly mine as foreman Jordan can now use a number of employes at that point for whom there had become scarcely room in the Powderly mine. The construction of these new works will give the south side men full time for the entire summer and will materially assist in the industrial boom that the city is to have this season. / No. 3 colliery on the south side is idle today as workmen are engaged in putting in an endless chain to facilitate the taking of cars out of the mine. The

introduction of the cable will do away with fifteen stations in the mine or in other words it will do the work of fifteen driver boys and fifteen mules. It will, however, be of great benefit to the miners as by the old methods the cars could not be handled rapidly enough to keep the men supplied and there were many complaints on this account. / Tomorrow will be pay day at the south side collieries.” (*Carbondale Leader*, April 10, 1899, p. 5)

On November 16, 1899, Joseph Golden, age 16, who worked around No. 1 Shaft, fell as he jumped off a moving Gravity Railroad train, and the cars ran over both of his legs. He died that night at the Emergency Hospital in Carbondale. Here is the account of the accident that was published in the *Carbondale Leader* of November 17, 1899:

“THE ACCIDENT PROVED FATAL. / Joseph Golden Who Was so Badly Injured Yesterday Died at the Hospital Last Night. / Joseph Golden, 16 years of age, who lived with his uncle Martin Golden, on Scott street, died at the Emergency hospital at 8 o’clock last evening. Soon after the dinner hour yesterday, the lad had started to get a pail of water. / He got onto a passing gravity train, which would take him to the house where he could get the water, and as he attempted to get off, he fell in such a manner that the train ran over both legs, the left one was severed near the body and the right one was crushed to the knee. He was dragged some distance. When picked up he was still conscious. / Dr. Kelly, who was summoned, temporarily dressed both limbs, and the lad was taken to the hospital in the ambulance. He was employed at and worked around No. 1 shaft. A mention was made in the LEADER of the case yesterday, but the unfortunate lad’s name was misprinted. / Joe possessed a bright and sunny disposition, and had many friends not only among his young playmates but all who knew him. His sad death should be a warning to all of the great danger there is in attempting to board a train in motion. The funeral will be held at three o’clock Sunday afternoon.” (*Carbondale Leader*, November 17, 1899, p. 5)

No. 3 Shaft

No. 3 Shaft of the D. & H. C. Co. was on Pike Street at the Lookout.

In the twenty-first anniversary edition of *The Carbondale Leader*, May 18, 1893, on the question of “coal operations,” we read: “No. 3 or ‘Lookout’ shaft was started about the same time [1853].” The engine house of this shaft burned May 20, 1874, but was rebuilt the same year, with two Cornish bull pumps, lifting 2,700 gallons of water per minute a height of 74 feet.

In November 1859, James Carroll was killed by a fall of roof at No. 3 Shaft as he was engaged in taking out pillars in an exhausted chamber. Here is the report on the accident from November 26, 1859 issue of the *Carbondale Advance*:

“James Carroll, two or three weeks ago, was killed by the falling of the roof upon him in the mines at No. 3 shaft, while engaged in taking out pillars in an exhausted chamber. We learn that the falling slate first caught him by the feet, and held him fast in that position for some time before he was completely buried and crushed by the descending mass. His fellow workmen in the meantime, being unable to render him the least assistance without almost a certainty of sharing his fate.” (*Carbondale Advance*, November 26, 1859, p. 2)

From an article that was published in the February 23, 1861 issue of the *Carbondale Advance*, we learn that good progress is being made in getting the water out of No. 3 Shaft, with the expectation that coal will be shipped from there in a few days. We also learn that the huge “pockets” at Honesdale were “recently constructed.” Here is that article:

“The Coal Business / Is progressing encouragingly here.--Considerable progress has been made in clearing No. 3 Shaft, at which operations have been prevented by water, and coal will be shipped from it in a few days. The coal shipped is deposited in the huge ‘pockets’ recently constructed at Honesdale.” (*Carbondale Advance*, February 23, 1861, p. 2)

By early March 1861, the D&H mines were all back in operation, with very good prospects “of a larger business than at any preceding season.” In the *Carbondale Advance* of March 3, 1861, we read:

“Progress of Business. / The water which impeded the mining of Coal at No. 3 Shaft since the flood, has been exhausted and work has commenced at that place. The other Shafts of the Co. are we believe all in operation. The Operators that sell Coal to the Company are all at work successfully. There is now a prospect of a larger business, than at any preceding season.” (*Carbondale Advance*, March 2, 1861, p. 2)

On Sunday, March 16, 1873, the engineer at No. 3 Shaft got his left hand caught in the engine there. His hand was crushed, his wrist twisted, and the muscles loosened from the elbow. Here is the report on the accident that was published in the *Carbondale Leader* of March 22, 1873:

"The engineer at No. 3 shaft met with a very painful accident on Sunday. While working around the engine, he slipped, and, in endeavoring to balance himself, put out his left hand which was caught by the machinery and crushed, his wrist twisted, and the muscles loosened from the elbow." (*Carbondale Leader*, March 22, 1873, p. 3)

On Monday, March 27, 1876, there was a general resumption of mining throughout the anthracite coal regions. On March 30, work was resumed in Shafts Nos. 1 and 3 and at the White Bridge Tunnel. In the *Carbondale Leader* of April 1, 1876, we read:

"On Monday there was a general resumption of mining throughout the anthracite coal regions. Work was resumed in shafts Nos. 1 and 3 and the White Bridge Tunnel of the D. & H. C. Co. on Thursday of last week. The Company's mines in this vicinity are now being run on pretty fair time." (*Leader*, April 1, 1876, p. 3)

Here are the accidents that took place at Shaft No. 3 that are reported in the 1877 *Report of the Inspectors of Mines*:

pp. 146-147: January 9: Christopher Riley, age 31, was in a non-fatal accident (back and head severely injured by premature explosion of a blast) at No. 3 shaft, Carbondale City.

pp. 146-147: April 13: Peter [possibly Patrick] Malia, age 14, was in a non-fatal accident (slightly injured by a fall of roof) at No. 3 shaft, Carbondale City.

pp. 148-149; June 6: David Chelton, age 16, was in a non-fatal accident (body squeezed between a car-load of props and the roof) at No. 3 shaft, Carbondale City

From 1880, we learn the following data about Thomas Coogan and Franklin Pierce Franey, both employees at No. 3 Shaft in Carbondale:

"**THOMAS COOGAN**, foreman of No. 3 shaft, was born in Carbondale, in 1834, and married Rosanna Fitzpatrick, a native of Ireland. He began work for the Delaware and Hudson Canal Company in 1846, was appointed headman of the shaft in 1858 and foreman in 1860. He was a member of the home guard and took part with it in its limited service during the Rebellion." (p. 452B)

"**FRANKLIN PIERCE FRANEY** was born in Providence, August 26th, 1853; was a member of the Providence military company five years; came to Carbondale April 13th, 1877, and worked at the Powderly mines about four months, and was appointed engineer at No. 3 shaft November 13th, 1879. He had formerly been engineer at Leggett's creek four years. He married Alvira Jenkins, of Schuylkill county." (p. 452C)

1881: Carbondale No. 3 Shaft, output of coal, 6,182.18 tons; days worked, 239.

The employees at No. 3 Shaft, in 1884, were generous in their contributions to the GAR

Monument Fund in Carbondale. As a group, they donated a total of \$26 to the fund. In the *Carbondale Leader* of December 5, 1884, p. 3, we read:

“ACKNOWLEDGEMENTS. / Up to the date of this paper the following contributions to the [GAR] Monument fund have been received: / **No. 3 SHAFT.** / Thos. Coogan, \$2. / James Campbell, Frank Franey, Pat’k Murray, \$1 / Patrick Lannon, John Kennedy, John Lacken, Mike Brown, Frank Wells, Mike Murray, A. Collins, John Malone, James O’Malley, John McAndrew, Peter O’Neill, D. Lewis, Thomas Boyland, Mike Murphy, Wm. Burke, Chas. McCann, Patrick Barrett, Patrick Murphy, Tom Gordon, James Boyland, D. Davis, O. Reynolds, John McDonald, D. Lewis, Wm. James, Joe Wisely, Thos. Carroll, Mike Duggan, Joe Chilton, Jno. Chilton, Martin Gallagher, Thos. Horan, Mike Hart, Thos. Savage, Frank McKenna, Pat Duggan, Pat Devany, Martin Collins, John McGowan, Mike Walsh, 50 cents. / Mike Moran, Tim Collins, Wm. Davis, Pat Purcell, 25 cents. / Total, \$26.00.” (*Carbondale Leader*, December 5, 1884, p. 3)

In the May 16, 1885 issue, p. 3, of the *Carbondale Advance*, it was reported that “The Soldiers’ Monument is now in place in the Park, and looks fine.” The following information about the fountain that was also installed in the Park at this time is also reported in that same note in the *Carbondale Advance*: “The basin of the fountain has been received, but the fountain itself will not be here till about the 1st of July.”

The employees at No. 3 Shaft were also among those who contributed to the fund for the aid of the strikers in the Lehigh district. In an article titled “Those Who Have Contributed” that was published in the November 28, 1887 issue of the *Carbondale Leader* on p. 4, the names of the employees at “No. 3 Shaft” and “Company Hands” who gave to the fund for the aid of the strikers in the Lehigh district are listed. The specific amount given by each donor (from 25 cents to \$2) is given in the article; the total amount of donations received is \$46.00.

Here are the names of the employees at “No. 3 Shaft” who gave to the fund:

John Shelton, Joe Hawkins, Anthony Hoben, John Haley, Wm. Burke, Patrick Duggan, John Mullaney, John Murphy, Wm Myers, James Carney, Mike Carney, John McDonald, Mike McDonald, John Flannery, Mike Flannery, John Cordnor, Mike Murry, Thos. Loftus, Pat Donnelly, Mike Hopkins, Wm. Conner, Mark Wilson, Patrick Flannery, Mike Corcoran, Wm. Martin, Lawrence McNally, Michael Fox, John Walsh & Co., Ed Malia, James Malla, Wm. Davis, James Kerrins, John McAndrew, Patrick Purcell, Rube Miller, Thos. Boylan, Henry Kennedy, John Connaughton, Michael Loftus, Peter O’Neill, Davy Thomas, Frank Shannon, Thomas Cameron, and Wm. Gordon. Here are the names of the “Company Hands”: Roger Collins, Martin Collins, Frank Franey, Michael L. Brown, Phillip Farrell, John Walker, Charley Jordan, Pat Boland, Pat Purcell, F. F. Grady, and one anonymous donor.

From the *Reports of the Inspectors of Mines*, 1887, we learn that on April 14, Patrick McDonnell, age 14, employed at No. 3 shaft in Carbondale City, was in a non-fatal accident (arm and collar-bone broken; riding on bumper of car and fell).

On March 7, 1890, Matthew Brown, age about 15, a driver boy at No. 3 Shaft, slipped and fell as he was coupling cars at the shaft and his hand was caught and jammed between two loaded cars. Dr. Kelley examined the boy following the accident, and even though there were no external cuts or bruises on the body, Dr. Kelley was not optimistic that the boy would live. Here is the report on the accident that was published in the *Carbondale leader* of March 7, 1890:

"SEVERAL SEVERE ACCIDENTS. / Matthew Brown Probably Fatally Injured This Morning. / Matthew Brown, a son of Peter Brown, of the West Side, about fifteen years of age, a driver boy at No. 3 shaft of the Delaware & Hudson Canal Company, met with a frightful accident that will probably result in his death. It was about half-past ten o'clock when he was preparing to haul a trip of loaded cars toward the shaft. He leaned between two of them to couple them together when he slipped and his hand fell between the bumpers as they came together and it was caught and jammed by the combined weight of the two loads. He was unconscious when picked up, and was bleeding from the nose, mouth and ears. The company ambulance was summoned and he was taken to his home where Dr. Kelley examined him. / There were no external cuts or bruises, nor any outward evidence of a fracture of the skull, but the boy's symptoms indicate a fracture at the base of the skull. Dr. Kelley would not say to-day that the boy was fatally injured, but thought that the chances were against him, as they are in all such cases. . ." (*Carbondale Leader*, March 7, 1890, p. 4)

A fire broke out in No. 3 Shaft on Sunday evening, March 9, 1890. The fire, it was believed by many, was caused by boys who were playing in the building and may have accidentally ignited it. From the report on the fire that was published in the March 10, 1890 issue of the *Carbondale Leader*, we learn many interesting facts about No. 3 Shaft and about the mines in Carbondale. We learn that:

- The foreman of No. 3 Shaft was Thomas Coogan
- The Carbondale Fire Superintendent was Superintendent Bowers, who expressed the belief that the fire was set by boys who entered the mine through what was called the 'big dip' near the foot of plane 28 on the Gravity Railroad. There in the seclusion of the mine, on Sundays and holidays, they sometimes whiled away the time at 'old sledge' and 'stud house poker.'

- If the fire had not been quickly extinguished it might have taken hold of the props and then of the coal and slate; in which case there is no telling where it would have stopped, if at all. Powderly No. 1 and No. 3 mines are all connected and if the flames had gained headway the entire lower end would have had to be flooded and hundreds of hands thrown out of employment. It might even have extended to Coal Brook and Wilson Creek tunnels, which are also connected, and in that case nearly 2,000 hands would have done no work for some time to come.

Here is the complete text of this very interesting and informative article from the March 10, 1890 issue of the *Carbondale Leader*:

“FIRE AT NO. 3 SHAFT. / It Might Have Been Very Serious in its Results. / A fire broke out last evening in No.3 shaft which, but for prompt discovery and action, might have been a very serious thing. About eight o’clock Thomas Coogan, foreman of the shaft, was notified by the night watchman that a cloud of smoke was issuing from the mouth of the shaft and that flames could be seen at the bottom. Mr. Coogan immediately come up town and found Superintendent Bowers at the evening service in Trinity church. From there the men hurried to Coal Brook colliery where two hundred feet of hose was procured and taken to the shaft. There it was attached to the pump and a stream of water sent down the opening. The fire was extinguished in a short time by the water, when the men went down the shaft and found the tool shanty at the bottom destroyed. Mr. Bowers is inclined to believe that the fire was caused by boys who were playing in the building and may have accidentally ignited it; or it may have been maliciously set on fire. The boys effect an easy entrance to the mine through what is called the ‘big dip’ near the foot of plane 28 on the Gravity and on Sundays and holidays they seek seclusions to while away the time at ‘old sledge’ and ‘stud house poker.’ / The possible damage of this fire was very great. Had it not been discovered promptly and extinguished it might have taken hold of the props and then of the coal and slate; in this event there is no telling where it would have stopped, if at all. Powderly, No. 1 and No. 3 mines are all connected and if the flames had gained headway the entire lower end would have had to be flooded and hundreds of hands thrown out of employment. It might even have extended to Coal Brook and Wilson Creek tunnels, which are also connected, and in that case nearly 2,000 hands would have done no work for some time to come. / We want no repetition of the Olyphant mine fire in this city, and the boys whose carelessness or maliciousness might have caused a very serious result have had a lesson.” (*Carbondale Leader*, March 10, 1890, p. 4)

In the April 12, 1898 issue of the *Carbondale Leader*, it was announced (1) that the miners and most of the other workers at No. 3 mine had been laid off indefinitely, (2) that no more coal would be taken out at No. 3, and (3) that the outside hands at the shaft had been discharged and that there would be no further need of them. Here is that announcement:

“NO WORK FOR TWO MONTHS. / That Was the Answer the No. 3 Miners Received From Superintendent Rose. / The miners and most of the other workers about No. 3 mine were laid off indefinitely last week and yesterday a meeting of the men interested was held to consult over the state of affairs now existing and the outlook for the future. The matter was talked over at length. / The men were anxious to learn what action the company contemplates taking so that they might know whether or not to seek employment elsewhere and a committee consisting of Joseph and William Davis was appointed to wait upon superintendent C. C. Rose, of Scranton, superintendent of the coal department, and learn the company's plans. / Mr. Rose was seen yesterday afternoon. He informed the men that no more coal will be taken out at the No. 3 opening and that it will take at least two months to cut a hole through to No. 1 during which time there will be no more work for the men. The outside hands at the shaft were discharged on Friday as there will be no further need for them in any case.” (*Carbondale Leader*, April 12, 1898, p. 5)

On January 27, 1901, No. 3 Shaft building was destroyed by fire. Here is the report on the fire that was published in a Carbondale newspaper on January 28, 1901:

"AN OLD LANDMARK RAZED YESTERDAY / No. 3 Shaft Building Destroyed by Fire Incurring a Loss of Probably \$25,000. / The old No. 3 or 'Lookout' shaft of the Delaware & Hudson company was destroyed by fire yesterday morning incurring a loss to the company of upwards of \$25,000. About 8:30 o'clock three men were lowered into the shaft and sometime after that a number of men who sat in the engine room saw smoke and flames issuing from the mouth of the shaft. One of them immediately ran to the house of John Boylan and turned in an alarm from box 58, on Pike Street. The others attempted to get out the hose stored near the mouth of the shaft but the flames increased so that they were unable to do so. / The fireman immediately filled his boilers, opened the escape valve and drew the fire from beneath the boilers. By this time the Columbias had arrived and shortly after the second alarm brought the Mitchell and Cottage companies. The Columbias soon had two streams going from the Pike street plugs and the Mitchells two from Cottage street. The Cottagers also got one stream going, making five in all. / The fire was by this time raging fiercely, fanned by a rushing current of flame and air from the shaft. The firemen worked might and main against great odds and the coal department men were called to their assistance. The boiler room and blacksmith shop and the tall shaft tower were soon enveloped in the blaze, they being as dry as tinder. With the seething boilers and the tower in danger of falling the firemen were in considerable danger but they pushed as near to the mouth of the shaft as the intense heat would permit and directed several of the streams down the blazing aperture. It was 10:30 o'clock before the flames were under control and at that time the firemen leaving five men from each company to assist the Delaware & Hudson men departed. The buildings had been razed, however, and the men left behind gave their attention to extinguishing the flames in the debris and the shaft. / At 11 o'clock the signal for the release of the firemen was given but instead of 'taps' the regular alarm was rung in. At

three in the afternoon the flames had all been quenched but the signal for the companies to go to the scene and reel up the hose were given. Kirk Rose, local superintendent of the coal department, was early on the scene and remained to the last, personally directing the work of fighting the fire. / The damage is extensive, although it is impossible at this time to form an accurate estimate. There were four engines destroyed and a number of lathes, drill presses and other machines used in the blacksmith and machine shops. Three large 'bull' pumps, used to clear No. 1 and 3 mines of water were disabled as was the endless rope systems which furnished power to haul the mine cars in the underground workings. / It is thought the boilers and pumps can be repaired and placed in service in a short time. There is an abandoned working in No. 3 shaft which will hold the water for about three days at this time of year. If the temporary pumps, which will at once be rigged up, can be got in operation by that time it will save the flooding of the mine which would cause still greater damage. In the two workings thrown idle by the fire about 500 men and boys were engaged, but a number of these will find employment on the repair work and superintendent Rose believes that within a week the colliery will again be in operation. Mules will replace the endless rope system, which was an apparatus of recent installation having been put there by Mr. Rose. / The three men; who were lowered into the shaft escaped through the opening to No. 1 mine. The origin of the fire has not been given out but the general supposition is that one of the men dropped a mine lamp the blaze from which ignited the woodwork of the shaft, the upward current of air carrying the flames beyond their reach. / The Lookout shaft was one of the oldest landmarks in the city, the original structure having been erected upwards of forty years ago. It has been repaired and remodeled at times and years ago was one of the most important in the valley. Of late years, however, it was used only for pumping purposes and was to have been superseded by a new structure, work on which had already begun. The greatest damage was caused by the destruction and disabling of the apparatus used in working the mine. Large crowds yesterday afternoon visited the place and viewed the remains of the old landmark." (clipping the a Gritman scrapbook, dated Monday, January 28, 1901)

Four years later, on March 13, 1905, No. 3 Shaft was again destroyed by fire. Here is the report on this fire that was published in a Carbondale newspaper that day:

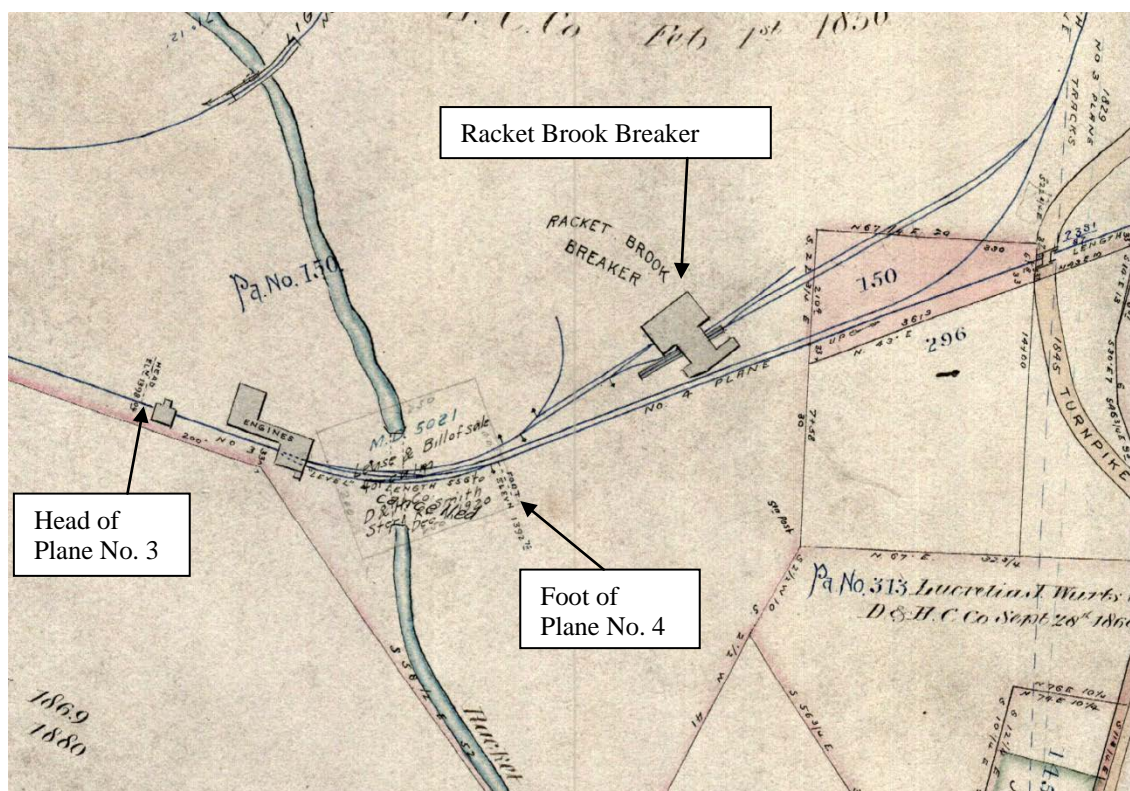
"NO. 3 SHAFT DESTROYED BY FIRE / The carriage house, engine and boiler rooms of No. 3 shaft of the Delaware & Hudson company, at what is known as the 'Lookout' on Pike street, were totally destroyed this morning at an estimated loss of \$20,000. As a result over 200 men were thrown idle. This is the second time the shaft has been burned within a few years. / The fire broke out about 5:15 o'clock. It was caused, it is believed, by an over-heated stack in the boiler house and was discovered by workmen employed at the place. A general alarm was sent in from the box at the McDonough store, and the Columbia, Mitchell and Cottage hose companies responded. The fire, however, spread rapidly and fanned by a strong draft from the shaft, was soon beyond control. The carriage house, engine house and rest of five boilers were destroyed. /

The plant was used to lower men into No 3 mine, and also supplied steam for pumps and underground apparatus. The pumps were rendered useless, and unless they can be soon repaired, there is danger of the mine being flooded. / From fifty to sixty men were employed in the No. 3 workings proper and there are thrown out of work, No. 1 mine, which is connected with No. 3, was also thrown idle, but it is expected that it will be in operation again in a few days. Over 200 men are employed in the latter." (clipping in a Gritman scrapbook, dated Monday, March 13, 1905)

1888

Number 3 Breaker (at Gravity Railroad Plane No. 3)

Given below are several articles about accidents that took place "at the breaker at Plane No. 3 on the Gravity Railroad." There was no breaker at Plane No. 3. Level No.3, from the head of Plane No. 3 to the foot of Plane No. 4 was very short. There was a breaker not far from the foot of Plane No. 4 on the Gravity Railroad, the Racket Brook Breaker, as can be seen from the detail given below from the 1895 *Gravity Railroad map volume*. The references in the articles cite below to "the breaker at Plane No. 3 on the Gravity Railroad", it seems safe to conclude, should be taken to mean the Racket Brook Breaker, which was located just above the foot of Plane No. 4.



Detail from 1895 *Gravity Railroad map volume* in the collection of the Lackawanna Historical Society, Scranton, PA

On Tuesday, June 12, 1860, John Joyce, aged about 16 years, and employed “about the Coal Breaker near No. 3 Plane,” in riding up the line by accident got caught under the cars and was fatally injured. Here is the report on the accident that was published in the *Carbondale Advance* of June 16, 1860:

“Fatal Accidents. / Two unfortunate accidents have occurred upon the Railroad this week. On Tuesday afternoon JOHN JOYCE, aged about 16 years, employed about the Coal Breaker near No. 3 Plane, in riding up the line by accident got caught under the cars and was fatally injured. He died the same night. / On Wednesday afternoon a son of JOHN B. CAREY, aged about 10 years, was run over by the Cars, near the mines, and died almost instantly.” (*Carbondale Advance*, June 16, 1860, p. 2)

On Tuesday, November 10, 1874, a boy named Reardon, who was a member of the Father Mathew cadets, was killed near the breaker at No. 3 on the gravity road. In the *Carbondale Leader* of November 14, 1874, we read:

"A boy named Reardon was killed near the breaker at No. 3 on the gravity road on Tuesday. He was a member of the Father Mathew cadets. The funeral was held on Thursday afternoon." (*Carbondale Leader*, November 14, 1874, p. 3)

On Saturday, December 19, 1874, Thomas Watkins, aged 12 years, was playing hide and seek with some of the other boys near a shaft in the breaker at No. 3 on the Gravity Railroad. The breaker machinery was suddenly started and the clothes of the boy were caught in a shaft, and the boy was carried round the shaft several times, and was probably killed almost instantly. Here are the details on this tragic accident that were published in the *Carbondale Leader* of December 26, 1874:

“ACCIDENT AND DEATH. / Last Saturday a boy named Thomas Watkins, aged twelve years, who was employed in the breaker at No. 3 on the gravity road, met with a sudden death. The machinery of the breaker was stopped for a time and young Watkins was playing ‘hide and seek’ with some of the other boys near a shaft. The engineer started the machinery without giving any warning signal it is alleged, and the clothes of the boy Watkins were caught in a shaft. He was carried round the shaft several times, and was probably killed almost instantly. The body was badly mangled and a number of bones broken. The corpse was taken to the home of the boy’s parents on Welsh Hill. The funeral was held on Monday. / It was thought to be advisable to hold an inquest on the body, and to inquire into the cause of the boy’s being caught in the shaft, as the law says expressly that all shafts in coal breakers shall be covered and fenced in with screens, so that no person can possibly get near enough to a shaft to receive any bodily hurt. As every breaker has a greater or less number of boys employed in it during working hours, and as all boys when they have an idle moment are in the habit of playing, the law provides, or has to tried

to provide, against the occurrence of accidents around these places. There are enough deaths, one would say, in the mining regions from unavoidable causes; and when a person is killed in a manner that might seem to have resulted from a neglect of the legal requirements, it is but justice to the friends of the person killed to investigate the matter carefully. Alderman Kinback, therefore, acting as coroner, summoned the following-named gentlemen as jurors: Thos. Voyle, foreman, Richard Jones, David Lewis, Morgan Thomas, George Smith, and James Byrne. The jury examined the body of the deceased and the place where he was killed. Some of the jurors were not at all satisfied with the looks of things around the shaft, and it is said that there was not the required protection, and that it was an easy for a boy to get caught on the shaft. In order that the jury might be enabled to receive further instructions on the legal points the inquest was adjourned until that Inspector Patrick Blewitt examined the breaker and pronounced it to be 'all right.' Mr. Voyle, foreman of the jury, was obliged to attend the Mayor's Court on Tuesday evening, and the case was again adjourned until Wednesday evening." (*Carbondale Leader*, December 26, 1874, p. 3)

On November 13, 1875, a can of oil that had been placed on a stove at the breaker at No. 3 by an employee who was not thinking about what he was doing exploded and set fire to the breaker. Much damage was done before the fire was extinguished. In the *Carbondale Leader* of November 20, 1875, we read:

"Between seven and eight o'clock on Saturday morning the breaker at No. 3 on the gravity road caught fire from the explosion of a can of oil which had been placed upon a stove by a foolish employee. Considerable damage was done before the fire was extinguished." (*Carbondale Leader*, November 20, 1875, p. 3)

On January 25, 1881, at No. 3 Breaker on the mountain division of the Gravity Railroad, John Wagner from South Canaan, as he was hitching cars, got caught between two cars and badly crushed. He died at 5 P.M. that same day. Here is the report on the accident that was published in the *Carbondale Advance* of January 29, 1881:

"A shocking accident occurred at No. 3 Breaker, on the mountain division of the Gravity Railroad, just after noon on Tuesday. John Wagner, a young man, son of Mr. George E. Wagner of South Canaan, as he was engaged in hitching cars, was caught between two cars and fearfully crushed. His injuries were so severe that he died at 5 o'clock on the same afternoon. His age was about 23 years, and unmarried. / After brief religious services at his boarding place by Rev. W. M. Hiller, on Wednesday afternoon, his remains were taken by sorrowing friends to his home in South Canaan, where the interment would take place on Thursday."(*Carbondale Advance*, January 29, 1881, p. 3)

James J. Bryden, who formerly worked as a door tender in the Midland Mine, later obtained a position at No. 3 breaker. At the breaker, Bryden worked with the mules and found them to both docile and intelligent. In the biographical portrait of James J. Bryden that was published in *The Delaware and Hudson Railroad Bulletin*, March 1, 1935, pp. 35-36, we read:

“As there was small probability that he would ever earn more than 36 cents a day at that work [a door tender in the Midland mine] Mr. Bryden obtained a position at No. 3 breaker, now abandoned, as a handyman. He picked slate, weighed coal, or drove a mule on the culm bank as occasion might demand. Contrary to the general opinion that mules are short tempered and apt to kick at their drivers at the slightest provocation, Mr. Bryden found them to be most docile animals which readily responded to kindness. Frequently a car would be loaded with refuse from the mine and the mule would walk to the end of the pile unaccompanied. Arriving there he would stand quietly while the load was dumped, then return for another load.”

1889

Offerman's Breaker

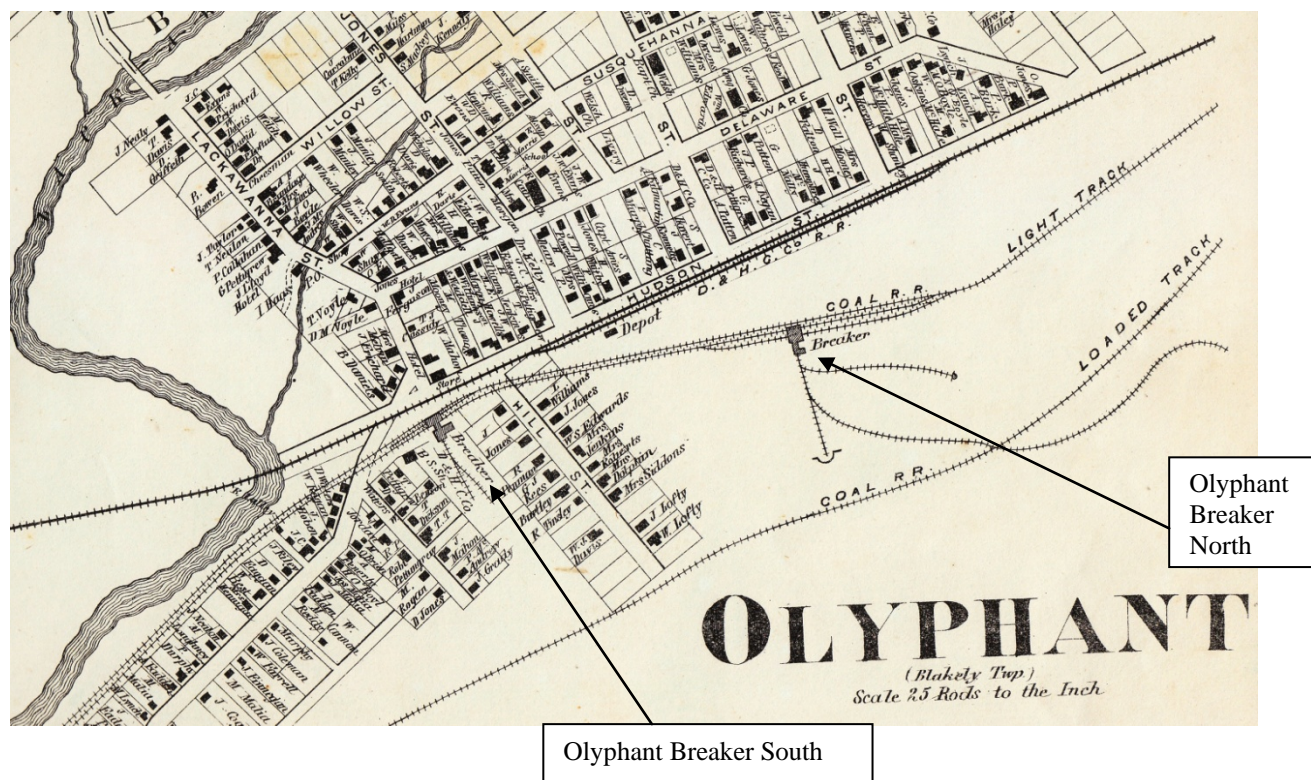
The only information that we have located to date on Offerman's Breaker is the following statement in the August 11, 1860 issue of the *Carbondale Advance*:

“Offerman's Breaker is nearly ready for use. . .” (*Carbondale Advance*, August 11, 1860, p. 2)

1890

Olyphant Breakers

Shown below is a detail of the 1873 *D. G. Beers* maps of Olyphant. Shown on this map are two breakers in downtown Olyphant, both of which are located on the light track of the Delaware and Hudson Gravity Railroad in Olyphant. For the sake of clarity of reference, we will refer to them here as Olyphant Breaker South and Olyphant Breaker North.



In the photograph shown below we see a coal breaker, Gravity Railroad coal cars, some passengers on a platform/at a station on what appear to be Gravity Railroad tracks, a steam locomotive running on triple-gauge railroad tracks. Where was the photograph taken? What are we looking at?



The photograph shown above has been widely reproduced, as shown above.

The copy shown here is from a Photo Post Card in the archives of the Minisink Valley Historical Society. On the reverse of the post card someone has written: "Just South of Carbondale Station / Showing 4-Rail North Bound Track. / Inside Rail is Gravity Gauge ; Next is Std. GA. Rail for D&H Steam / Outside is 6 Ft. GA. for Erie / Train in Distance is D&H Std. GA. / Date in Early 1870s"

Shaughnessy p. 62, also uses this photo, from G. M. Best Collection. *Shaughnessy's* caption begins as follows: "A northbound passenger train moves on multigauge trackage near Dickson, on the line between Carbondale and Scranton that opened July 4, 1871. . ."

Osterberg, p. 30, also uses this photo with this caption: "A locomotive moves along the tracks outside Carbondale"

The same photo is given in the D&H's *Track and Roadway* (p. 87), with this caption: "Steam Road, Scranton to Carbondale".

In those four presentations of that photograph, none of those four presenters has come right out and said "this is Olyphant" or "this is Mayfield" or "this is Carbondale", for example. And they have not identified a specific site for the very particular reason that in the photograph, as presented, all of Gravity Railroad and Valley Road and mining components shown in the photograph can not be identified in relation to a specific site. No explanation holds water. No explanation seems to work/make sense.

Why is that the case? What's wrong? The answer, we are convinced, is this: The image, in those four presentations of the photo, has been printed in reverse. Here is the same photograph when flipped right/left:

Here, again, is that same photograph when printed incorrectly:

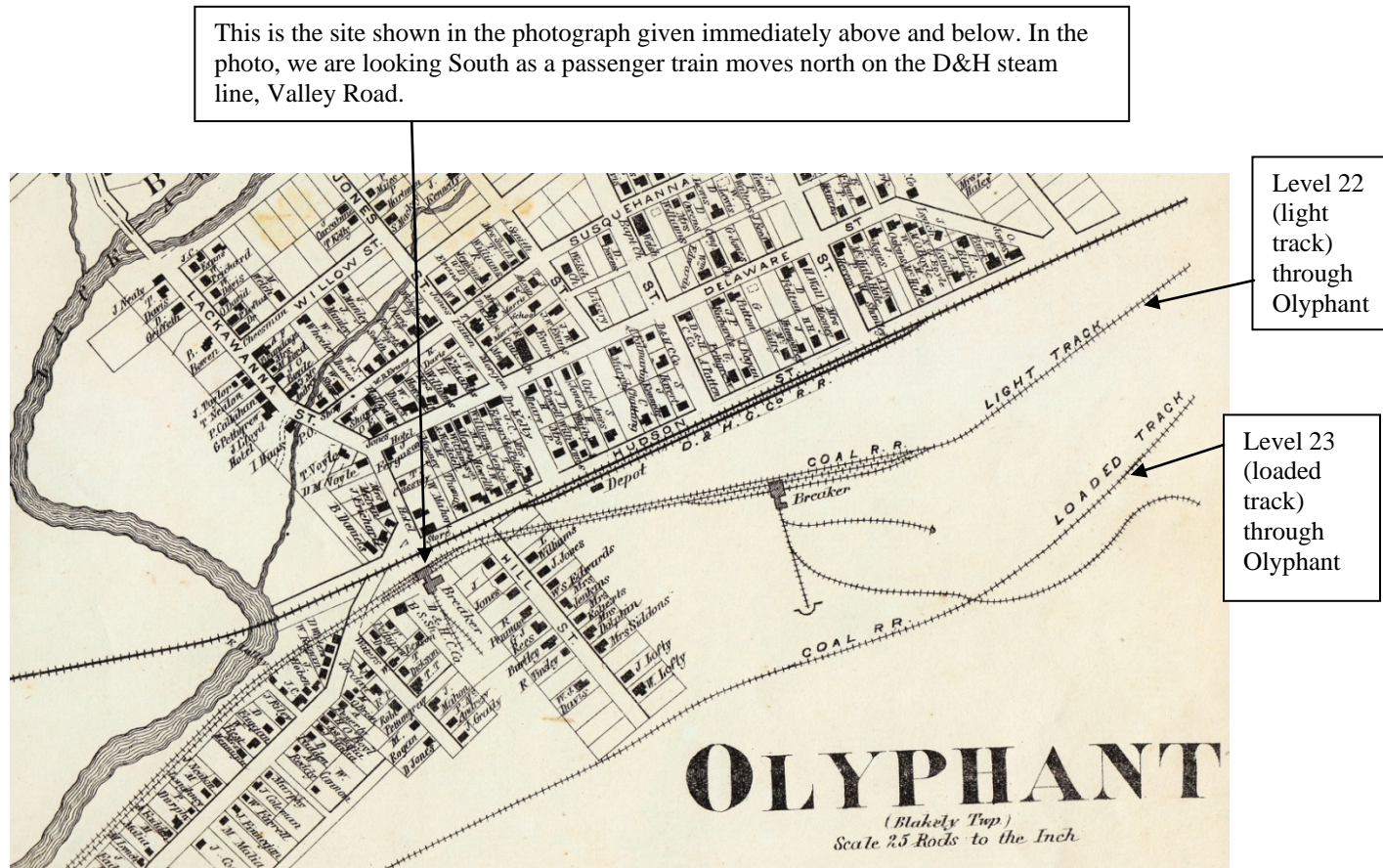


Here is that same photograph when printed correctly (flipped right to left):



Suddenly, the photograph makes sense. The breaker is Olyphant Breaker South.

Let's take a closer look at the specific location of Olyphant Breaker South on the D. G. Beers map of Olyphant:



Let's take a closer look at the photograph of the Olyphant South Breaker when printed correctly:

Empty Gravity Railroad coal cars descending through Olyphant on Level 22 (present-day Burke By-Pass) and the D&H breaker there, where, some of them, when filled, continued South on the light track to the foot of Plane 23 for shipment North to market. Empties needed south of Olyphant remained empty and were moved through Olyphant directly to the breakers where they were needed. When filled, they were then brought back to the foot of Plane No. 23 for shipment to market.

Gravity Railroad passenger station on the light track in Olyphant.

Olyphant Breaker South

"A northbound passenger train moves on multi- gauge trackage..." says *Shaughnessy*. Yes, I agree.

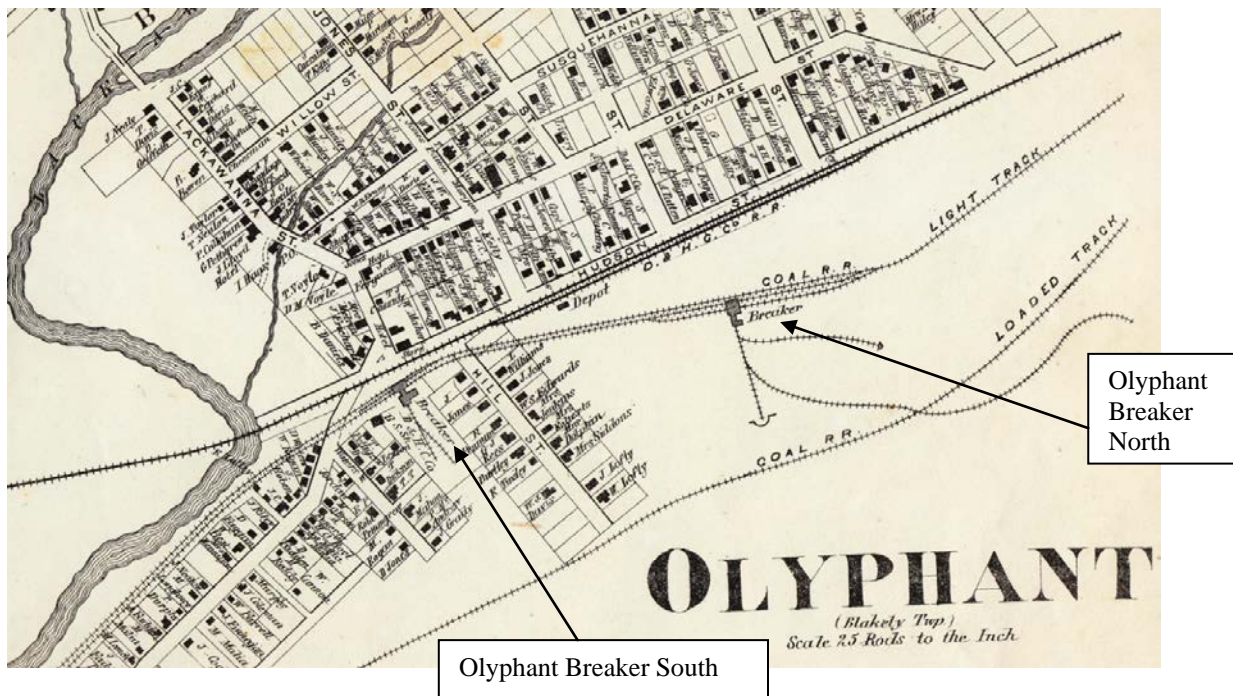
Level No. 22: Light Track, Gravity Railroad through Olyphant



Triple-gauge steam line (Valley Road) tracks: Gravity gauge, standard gauge, and 6-foot Erie gauge.

Olyphant Breaker North

As can be seen on the detail from the *D. G. Beers* 1873 map given below, Olyphant Breaker North was on the Gravity Railroad Light Track, in the broad, open area between the Light Track and the Loaded Track.



Here is the photograph of Olyphant Breaker North that is given in the Hudson Coal booklet, 1929:



“Pay Day Olyphant Colliery 1915” Photo in the collection of the Carbondale D&H Transportation Museum.



Pay Day Olyphant Colliery 1915. Photo by John Horgan, Jr. (Horgan #13437, 1915), given on page 2 of *Percival and Kulesa*.

1891

Pancoast Colliery

In the nineteenth century, *Throop* was known as *Goose Ridge*. That we have learned from the biographical portrait of Robert P. Savage, a carriage manufacturer and real estate owner of Dunmore, in *PABRLC* (pp. 797-98; photo, p. 796).

The Pancoast Breaker was located in *Throop*, “to the east, up on the hill” and it was serviced by the O&W and the D&H.

Here is a photograph of the Pancoast Breaker from the John Stellwagen Collection:



Pancoast Breaker, Throop. Located to the east, up on the hill serviced by O&W and D&H. Photo from the John Stellwagen Collection.

From *The Tribune-Republican*, Scranton, PA, Saturday, April 8, 1911, here is a very good account of the Pancoast mine disaster:

“Twenty-Nine Bodies Recovered From Blind Tunnel of China Vein In Pancoast Mine In Throop

Rescuers Still Removing Bodies

SIXTY-TWO PERISH IN MINE FIRE

Blaze In the Engine Room At Head of North Slope of Pancoast Colliery In Throop Fills Workings With Fumes and Blocks Workmen in Blind Tunnel of China Vein.

J. E. EVANS DIES IN TRYING TO REACH MEN.

Common Councilman John R. Perry Is Another Victim.

Twenty-nine Bodies Recovered Up to 2 o'clock This Morning

Dr. J. A. Holmes Here From Washington

At 3 o'clock this morning twenty-nine bodies were taken from the Price-Pancoast mine in Throop, where the lives of 350 mine workers were endangered yesterday morning by mine fire, resulting from the burning of a slope engine house in the China vein, some 700 feet below the surface.

During the day there were numerous reports as to the number of men entrapped in the mine. After midnight last night mine officials gave the number of missing as sixty-two.

At 2 o'clock this morning the work of removing the bodies is still going on.

The igniting of some matter, presumed to be greasy cotton waste in the engine house at the head of the "North" slope, brought on the worst mine disaster in the annals of subterranean horrors in the Lackawanna valley. Their only exit from their place of labor cut off by the smoke from the burning engine house, every man in the slope gangway lost his life.

Some of the officials at midnight declared that the men "lost their heads" and might have escaped through coolness in the face of danger. These officials declared that had the men followed the air course, they would have found an exit at the air shaft. On the contrary, men familiar with the mine stated during the afternoon that there was only one exit from the place where the men worked, and that this was through the slope that they entered.

Mining experts who discussed the accident late last night, said they were surprised at the position in which the bodies had been found. They gave it as their opinion that all the men could have escaped if they had run ahead of the smoke and fought their way through a return air course instead of running toward the fire. The return air course leads to an air shaft opening, 150 feet away from the hoisting shaft. No bodies were brought up through that opening and none of the rescuers entered the mine that way.

Dr. Holmes Here.

The disaster assumed proportions of national interest when Dr. J. A. Holmes, of Washington, DC, head of the government Department of Mines. and W. D. Roberts, superintendent of the department of instruction, reached this city at midnight. They were in Philadelphia attending a lecture. On learning of the disaster at the Pancoast they took the first train for this city and rushed to Throop in a taxicab. They expressed keen concern in the fate of Joseph Evans, foreman of the government's mine rescue crew stationed at Wilkes-Barre, and much interest in the operation of the apparatus worn by the rescue men.

Evans died, the first martyr from the ranks of the government's accident and mine rescue corps. At the head of a corps of twelve men, Evans arrived at the mine a little after 3 o'clock by the government's mine department car, equipped with every facility for the work at hand. Donning

his helmet, and strapping his oxygen tanks to his back, Evans was the first of his little band of five to board the carriage and to descend.

He met death in the eagerness to reach the entombed men at all hazards. His helmet, air-tight to prevent smoke or gas to reach his mouth, was covering his head, he rushed up to the spot where the fire raged and there worked with his own men and the company's hands to get a passage opened through the heat and smoke. His oxygen tanks and equipment, weighing forty pounds, was capable of keeping him up to two hours. The time he spent in working at the engine house, at the head of the slope, may have drawn on the capacity of his equipment for when the "helmet" men finally did get beyond the fire, his overexertion told. He rushed on far in the lead of his men and fell, presumably because his exertion was more than his oxygen could counterbalance. He was found by his mates, carried back to the foot of the shaft and an hour later taken from the mine—dead.

Superintendent Roberts, head of the government department of instruction, accounted for his death as due to overexertion, the same as a man that falls from too much running up hill. Mr. Roberts stated that death was likely due to carbon-dioxide poison.

The bodies of the dead men were brought to the surface, one at a time, in the mine carriage. Members of the rescue crews and volunteers carried the bodies to a morgue that had been fitted up in the colliery carpenter shop. Ten platforms, each six inches high and large enough to hold five bodies, had been constructed of heavy planking and arranged on the floor of the shop.

The bodies were laid in rows of five on the wooden platforms. Each form was covered with blankets brought from the mine company store, and after being identified was marked with an identification slip. A dozen undertakers with their wagons were on hand to remove the bodies to their morgues.

P. O'Boyle, claim agent for the Scranton Coal company; George Cooper, secretary of the Miner's Accidental fund; John E. Jones, outside foreman at the colliery, and Carl Raymond, of this city, assistant paymaster for the company, looked after the identification of the bodies.

Found Lying Face Down.

All of the twenty-one bodies recovered up to midnight were found in groups of threes and fives, all lying face down in the ditch alongside the track. Many of them held handkerchiefs pressed against their faces, showing how they fought to resist suffocation. Farthest in of all of the twenty-one the body of Mine Foreman Walter Knight was found, lying face down. Knight had warned the men, driving them out before him, when he fell. Not far from the body of Knight the rescuers came upon the body of Fireboss Dawe. He too, dying for air, buried his face in the ditch.

As early as 3 o'clock in the afternoon it was evident that the men were all dead. The rescuing gangs had no more than penetrated past the burned engine house when they found three bodies. The smoke and heat was so intense where the rescuers worked that they who had entered the mine six hours after the fire had started, reeled and fell and requires stimulants to keep revived.

"What show have these men got?" said one grim workman, stepping from the carriage. "What chance have they got when the rescuers themselves are falling over? They're all dead. No man can live down there."

No attempt was made to take the bodies from the mine in daylight. Carrying bodies from a mine in the face of a crowd of 5,000 people, among whom were wives and children of the dead, would not have served to quiet the thousands that crowded against the ropes.

Instead of bringing the bodies to the surface they were laid out in blankets at the foot of the shaft as fast as they were found. When night set in, when men could move about and their movements not be read except by the dim glare of mining lamps fastened to caps. the work of taking out the bodies was begun; a work that did not cease until day again was beginning to break.

Up and down glided the carriage. Four little tingles of a bell was the signal for all that another body, maybe two or three, was to be hoisted from the mine. Clang, clang, clang, clang sounded the bell, then a mighty puff of the engine, a rumbling, roaring sound, the rattling of powerful steel ropes and another body was brought up, checked, identified, and the identity of the dead man whispered from ear to ear at the shaft's landing.

At 3:30 o'clock this morning, thirty-five bodies had been hoisted to the surface. The eight rescue crews at work in the mine had located seventeen other bodies, and the officials fear that at least a dozen more men have lost their lives in the chambers and cross-cuts.

Engineer Discovers Fire.

The fire started in the hoisting engine house at the head of the "North" slope, the converging point of the Dunmore and China veins. It was discovered by the slope engineer, James Moore. Moore's duty required him to tend two slope engines, the engine of the "North" slope and that of the "West" slope, some 200 feet from the "North" slope engine house. He alternated between the two engine houses, and while at the "West" slope house he saw smoke breaking from the other house. He, with other men working in that part of the mine, started to battle the flames.

When the fire was discovered orders were given to "pipemen" to put it out before it made any headway. The order was given by Inside Foreman Walter Knight and Fireboss Isaac Dawe. Then Knight and Dawe, realizing the danger to the men in the tunnel, hurried off to warn them. On their way to the men they met John R. Perry, and told him of the fire. Perry joined them,

dismissing his laborer with an order to get out at once. Knight, Dawe and Perry reached the men, but were overcome on their return to the head of the slope.

Though some underestimation of the seriousness of the fire, which broke out a little after 9 o'clock, the outside colliery officials continued the mine and breaker working until 11 o'clock. Meanwhile the forces below were fighting the fire with the best means at hand. When the situation finally was realized a fire call was sent out which brought the J. B. Dickson Hose company from Dickson City, a mile from the mine. A five-hundred foot line of hose was then lowered into the shaft, some fifty-feet from the main hoisting engine room. When the hose was lowered it burst from the pressure.

Trapped In Tunnel.

Meanwhile the force in the China vein was still in the blind tunnel with the only exit shut off by the burning engine house at the head of the slope. Where the men were working was 2,000 feet from the fire. It is surmised that these men were working on in ignorance of their danger until the smoke from the head of the shaft was driven to them with the current of air. Realizing then that there was a fire the men rushed for the foot of the shaft, only to drop overcome by the smoke. Three men whose bodies were the first found had reached almost to the engine house, indicating that the warning reached the men too late.

It was impossible to keep the smoke from the men. It could be done by closing down the air fan. But this measure would avail no relief. To shut off the air would leave the tunnel at the mercy of the gases, which would mean death from that cause to the men. The fans were kept working. Bratticing for providing artificial air courses was the only resort left. This was started. Men rushed to and from the store house carrying rolls of canvas, 150 feet to the roll, and these were lowered into the mine through the main hoisting shaft. Thus the colliery force worked in an effort to check the smoke, rather than the flames, from morning until afternoon.

Lackawanna Man Arrives.

C. E. Tobey, assistant general superintendent of the Delaware, Lackawanna & Western coal department, arrived at the colliery at half past 12 o'clock. Told that there were men on the other side of the fire, Superintendent Tobey suggested that assistance should be sought and took it upon himself to volunteer the assistance from the Lackawanna's mine rescue car crew and also the government's mine rescue corps, stationed at Wilkes-Barre. Both crews were summoned by Mr. Tobey. The Lackawanna's crew was called from Kingston and arrived at the Pancoast at 3 o'clock, twelve strong. Five minutes later the government corps of twelve men commanded by Superintendent Charles Enzian and Foreman Joseph E. Evans, reached the colliery. They were ready to enter the mine ten minutes after their arrival.

Superintendent Enzian and Foreman Evans, equipped with oxygen helmets, oxygen cylinder tanks and a stick of potash, this for absorbing impurities, went into the mine at once, accompanied by Charles Johnson, of Parsons; Michael Clark, of Wyoming; Patrick Walsh, of Pittston; and George Kellam, a First-Aid superintendent, of Wilkes-Barre. In reserve, to relieve this squad, were Frank Jordan, of Wilkes-Barre; Reese Bennett, of Wyoming; Cyril Hammonds, Charles M. C. Manew, E. B. Dimmick, Thomas James and George Bleckner, all of the government crew of mine-accident rescuers. They came by the special car equipped with oxygen tanks and other paraphernalia and had their car backed into the coal chute switch of the breaker.

Conflicting Reports.

There was no word from below, except as came from men leaving veins above the China. All of these reports varied. Some of the miners said that there were seventy-five men trapped. Others cut the number to fifty men and ten boys. Mores said that there could not be more than thirty-five, but all of them declared that there was little chance for any of the China vein tunnel men getting out. These men finally reported the fire out at 3 o'clock. Following them, however, came another squad of upper vein men, who reported that the fire was not only still burning, but that the timber work was on fire and the roof falling. The playing of the hose on the roof cracked the heated rock and caused it to chip and fall in layers.

Among the men that came out of the shaft when the carriage hoisted a half dozen or more was John Evans, assistant inside foreman, who emerged linked with two men at 4:35 o'clock. Evans came from the carriage in bad shape. He staggered along, supported by the two men to the hoisting engine room, where he was taken in hand by Dr. Jacobs and Dr. Murray. They gave him a hypodermic and other stimulants which soon brought him around. While he was under the treatment Evans declared that there was still a chance to get to the men if things were hurried. He refused to go to his home, but latter was prevailed upon to go and was taken home in a carriage.

Doctor Enters Mine.

At 4:40 o'clock the carriage was again hoisted from the fire vein to take down more rescue corps men. Three of them with the oxygen helmets and knapsacks strapped to their backs were lowered. The carriage descended and was up the next minute to take Dr. Jacobs into the mine. Twenty minutes later Dr. Jacobs was hoisted back to the surface. Jumping from the carriage he called for blankets and whiskey. A volunteer ran two blocks to the office of Dr. Murray and returned with a large sasparilla bottle filled with whiskey. Another volunteer rushed to the store room and returned with an armful of blankets. Dr. Jacobs in charge of the bottle and blankets, immediately re-entered the mine.

With him descended Harry Birtley, son of the colliery superintendent, who had been underground all of the afternoon. Young Birtley went down to try to persuade his father to leave

the mine. "I will remain here until the last man is taken out" the father answered his son, and ordered the boy out of the mine. Superintendent Birtley, himself, was in an exhausted state. Dr. Jacobs noticed his condition and insisted on administering a hypodermic. It reached the surface that Superintendent Birtley had been overcome, but this report was contradicted by two rescuers who without hats or coats were hoisted at twenty minutes past five. These two men, themselves gasping for breath, rushed away and in another minute came running back carrying a First-Aid outfit. Both men got on the carriage, but neither man could speak for want of breath. "I can't talk," gasped one of them, when asked what the situation was below. The carriage descended with them, and ascending next minute, brought up Dr. Jacobs once more. This was at 5:20 o'clock. Dr. Jacobs called for more hypodermic, and announced that the situation looked "very bad." He re-entered the mine without further comment, except to give an order to Dr. Murray to remain at the entrance to the shaft.

Mine Inspector Enters.

Mine Inspector David J. Williams, whose jurisdiction includes the Pancoast colliery, arrived at the shaft entrance at 5:30 o'clock and was at once lowered to the China vein. On the carriage that he descended, Superintendent Birtley ascended. Superintendent Birtley on getting off the carriage ordered all hand fire extinguishers sent down. He went to his office, refusing to discuss the disaster or any of its details. He appeared worn out and on the verge of collapse.

"For God's sake, don't ask me any questions," he requested. "If you want to do me a favor, please don't ask me about this." With his leaving the mine came a report that "Joe" Evans, foreman of the government's rescue crew, had been overcome and was in bad shape. This report was confirmed at the same time by some of the minor officials directing the work from the surface. An hour later Mine Inspector Williams came out of the mine.

"Things are in bad shape down there," said he. "Evans has gone under. They are working hard to save him." The inspector declared that heat from the fire was so intense that rescuers could not penetrate to the tunnel. "We must first change the air before we can hope to reach the men. He, with many other men who kept coming up, expressed little hope of bringing out the imprisoned men alive. Inspector Williams said it could take four or five hours to dissipate the heat that walled off the rescuers and start a current of fresh air through the vein. The inspector returned to the shaft after a call at the colliery office. and was about to step on the carriage when Harry G. Davis, district superintendent of the Lackawanna, who came with the company's car from Kingston, suggested that Williams remain at the shaft entrance instead of re-entering the mine. "Stay here until I send for you," suggested Superintendent Davis. "You stay here until I send for you," the inspector answered. "This is my district. I'll come and go as I feel like it."

Could Not Give Exact List.

There was still no definite statement given out by any of the colliery officials. Superintendent Birtley when asked for a list of names of the men supposed to be working in the tunnel, directed the office clerk to give out the list of names. The clerk answered that he could give a list of the names of all of the men working in the mine, but could not give the names of the men working in that particular part of the mine. Besides, he said, that it is doubtful if the men were known by their names or were registered on the company's books by numbers.

Four "helmet" men were hoisted from the shaft at 7 o'clock. They were accompanied to the landing by Superintendent Davis. The "helmet" men were ordered to go to their car and get a "fresh air" stretcher and an oxygen tank. They returned immediately with the stretcher, equipped with a respirator and oxygen tanks at its head and canvas hood to cover the face of the man rescued, so that whether conscious or unconscious air might be pumped into the lungs automatically. Three quarters of an hour later, at 7:45 o'clock, these same four "helmet" men were hoisted, carrying the stretcher with "Joe" Evans, foreman of the government's rescue squad, on it. Dr. Jacobs walked back of the stretcher bearers. "I believe he's dead, but we're still trying to get him." said the doctor. Evans, however, was then dead, though his breast rose and fell as if living. His head was covered with the respirator and hood and oxygen was still being pumped into the man's lungs.

Enzian Comes to Surface.

The four rescue men had only just carried the body of Evans from the carriage when it again descended, and then brought up Superintendent Enzian. Two aids supported him, staggering from the carriage. He had remained underground directing his men until he could direct no longer. He was revived soon after he got to his car standing on the breaker switch.

General Superintendent W. L. Allen came from the mine at 7:45 o'clock. He reported that the rescuers and First-aid men were fighting for their own lives below. He was unable to say how many were caught in the tunnel, or how many men had chambers there. An hour before that, as he was going into the mine, he announced that the fire was about out.

Ambulances Sent For.

Hope for the rescue of the men seemed to be abandoned at 8 o'clock. Up to that hour, they clung to the possibility of the men getting into some corner free of smoke. But at 8 o'clock all of the officials stated that they did not think there was a man alive in the tunnel. Superintendent Birtley, Outside Foreman John Jones and other officials, at the colliery office, gave orders that phone messages be sent to all undertakers within call that had ambulances. The ambulances of the Delaware and Hudson company were also pressed into service.

The scene at the colliery during the afternoon was typical of the mine disaster. Ropes were strung to keep the crowd back from the mouth of the shaft. Back of the ropes stood probably 3,000 men, women and children, during the hours of the afternoon. There was very little crying heard. Camera men rushing about with tripods for a "good position" were greeted with banterings of "look pleasant" and followed by crowds of boys eager to get in the photograph.

But there were some women who, with heads in shawls, faces drawn and serious looking, stood against the ropes anxiously waiting for some news from the China vein. These were the wives and mothers of the missing men.

When Darkness Falls.

When darkness came the scene changed. Gloomy looking "Black Marias" ratted up to the colliery office from all directions. It was the coming of darkness and the ambulances just as dark that the scene took on a different aspect. Here and there from the crowd came the sobbings of women, whose husbands were in the mine. Near the entrance to the mouth of the shaft a woman who had waited and waited from early morning became hysterical. She tried to break through the rope, but was held back by the crowd. Her husband was in the China vein.

The only vehicles that traversed Throop's streets after 8 o'clock were mine ambulances and undertaker's wagons, all headed for the colliery. After dark the crowd increased to 5,000. Crowds from Olyphant, Dunmore, and Scranton came by car, and alighting at "Cooper's corner," fell in behind the ambulances and trudged through the mud to the mine. Along one street of the borough a woman walked, talking to herself.

"One lives in there; one lives in there; one lives in there; one lives in that house over there," she went on, pointing from house to house along the street where lived men numbered among the dead. A child walked at her side. "Who lives in there?" the child asked, but the mother did not answer.

When the crowd massed at the colliery it stopped at the roped enclosure. Chief of Police Michael Clancy and his two patrolmen of Throop had kept the crowd in hand during the afternoon with the assistance of a half dozen "specials." When dusk set in it became apparent that Chief Clancy would need help. There was a call about to be sent to Peckville for state troopers, but the colliery officers decided not to call the troopers. Instead, eight patrolmen of the Scranton force were dispatched to the mine, and they took charge of keeping the crowd in order. Superintendent of Fire, H. F. Ferber also was at the colliery to give any assistance of men or apparatus that might be required.

The Pennsylvania Coal company's rescue crew from South Pittston arrived at the colliery shortly after 7 o'clock. The eight men in the crew, in charge of their captain, Benjamin Milton, went into

the mine to search for bodies. They found three bodies lying in the gutter on the main gangway, 1,000 feet in from the scene of the fire.

A few hundred feet farther in, they came upon a pile of nine other bodies , all the men face down in the gutter, some with handkerchiefs stuffed in their mouths and others with their coats wrapped around their heads. Rescuers carrying out the body of Foreman Knight passed the Pennsylvania [crew] nearly 1,500 feet from the engine house that burned. Mine Foremen George V. O'Hara, William Jeffrey, and John Williams were with the Pennsylvania crew.

Fallon Was Active.

There were many instances of unselfish loyalty of man to man about the mine. Frank Fallon, of Throop, a runner, was one of the first to see the fire. Fallon rushed along the slope, came up to Pat Connolly and shouted for him to get out. Fallon then ran at full speed to a place where Joseph Browning, seventy-one years old, was at work. Fallon seized the old man, and with the aid of an Italian laborer carried him out. Browning, a door tender, was too old to run. In all Fallon got word to eighteen men that there was a fire.

Owners of Mine.

The mine is the property of J. R. Bryden and Eddy and Dickson coal sales agents of New York. It is operated by the Scranton Coal company.”

(End of article on the Pancoast Mine Disaster from *The Tribune-Republican*, Scranton, PA, Saturday, April 8, 1911)

In the *PA Mine Inspection Report, 1911*, we read the following about the Pancoast Mine Disaster:

“A very disastrous fire occurred in the engine house in the China vein of the Pancoast mine of the Price-Pancoast Coal Company, April 7, 1911. Disasters of this kind are very rare, but they may be very destructive both to life and property, as was the case in this instance. Not since the Avondale mine fire in September, 1869, has there been any similar disaster of equal magnitude. This engine house (if it can be properly designated as such) consisted of an open space excavated in the coal about 30 feet long and 10 feet wide, with twelve sets of ten-inch round timber, the collars between notches being 10 feet and the height being 8 feet. The engine was placed on the floor resting on two square stringers and fastened to the bottom rock. The platform on which the engine rested was 5 x 8 feet and made of two-inch plank. From the engine house a small opening about 6 x 6 feet was made through the coal to the passing branch that leads to the tunnel. The engine had been in use for about six years and had never at any time caused any apprehension on

the part of the inspector, superintendent, mine foreman, fire boss or any of the employes as to the possibility of danger from fire, and, in my opinion, judging from personal observation, no one would have deemed it possible that a fire could occur in the engine house that would be of such serious consequences. The unexpected happened in this instance. . . [T]he engine house was placed about 50 feet off the double track branch leading into the tunnel that cuts the China vein and on this branch twelve empty cars were standing. The veins at this point form a small basin and the tunnel is driven through the top rock of the China vein, penetrating the vein at a distance of 300 feet. The engine was placed at this point to hoist the coal. After the fire was ignited in the engine house the heat and smoke therefrom were carried by the air current to the double track branch directly opposite, setting the cars on fire and thence to the tunnel and through it to the workings of the China vein. . . It is my opinion, as stated at the inquest, that it was impossible for any of the men to escape, except those in Perry's and Bollton's gangways. As corroborative of this opinion, it may be stated that Mr. Perry, who drove the gangway and knew the connections better than any other man, lost his life while endeavoring to guide the people from his gangway to a place of safety. However, sixteen persons escaped from Perry's and Bolton's gangway!! Under the guidance of drivers and runners. . . The fire was extinguished, unfortunately too late to save the lives of other persons in the mine; but these persons could not have been rescued in any way after the fire was discovered. Even if the fan had been stopped, as suggested by a juror, the heat from the fire would have created a sufficient volume of air to carry the poisonous smoke from the burnt wood and coal to the men. Ordinarily about 25,000 cubic feet of air per minute entered the tunnel, and it can be assumed that the heat from the fire increased that amount, so that 50,000 cubic feet of poisoned air per minute passed into the tunnel. Assuming the area of the tunnel to be 60 feet, the velocity of the air would have been about 800 lineal feet per minute, which means that the air traveled at the rate of a mile in about 6 minutes. That being the case, how could any of the persons (except those in Perry's or Bolton's gangways who were notified of the fire by telephone.) have escaped, or how could any person from outside have given them any assistance? . . . Men could not breathe the poisonous laden smoke from the burning coal and wood and live more than a very few minutes. A great deal was said about there being no second openings from this tunnel; that the opening was merely a blind tunnel. Upon seeing this statement in the newspapers, I made a personal investigation of this particular place and found no second openings or avenues that the men could have escaped through if they had had a chance. However, while these second openings were probably not up to the requirements of the law as being always safe and available, no loss of life can be attributed to their condition. Even if the victims had been instructed how to escape, in case of accident by a gas explosion or a mine fire, none of them could have reached the second openings through the poisoned atmosphere, except those from Perry's or Bolton's gangways. . . The accident at the Pancoast mine has been the means of calling the attention of the Legislature to the danger of fires in coal mines and will and has brought about the enactment of measures that will, no doubt, do much to prevent the recurrence of such accidents. A synopsis of the testimony of the witnesses at the inquest, which continued for a period of eight days, is given herewith, together with the report of the inspector of the district, the report of the coroner's jury and the verdict of the jury. . .”

Here is the text on the Pancoast Mine Disaster state historical marker in front of the Throop Borough Building:

"On the morning of April 7, 1911, the nearby Pancoast mine here in Throop was the scene of a disastrous fire. Seventy-two miners died by suffocation, and a government rescue worker also was killed. This tragedy soon led to the enactment, on June 15, of state legislation requiring that all interior buildings at coal mines be constructed of incombustible materials."

The Rev. P. J. Murphy said the following of the Pancoast Mine Disaster:

"The appalling disaster which happened in the Pancoast Colliery in Throop on Friday morning, where seventy-two men trapped in a blind tunnel, seven hundred feet below the surface and with only one exit as stated in the press of yesterday morning, and that shut off by smoke and gas, were suffocated to death has shocked the world, with compassion and sympathy for the helpless miners, the victims of our greedy commercialism and effective Civilization. We feel the intensity of the calamity much more keenly than those at a distance on account of the holocaust occurring at our doors and the victims being our neighbors. . ." (*Scranton Republican*, April 19, 1911; reported by Bob McDonough, *Murphy*, p. 94)

1892

Pennsylvania Coal Company Collieries

In 1887, the Pennsylvania Coal Company had the following collieries, all in Dunmore, in the First Anthracite District: Shaft No. 1; Shaft No. 2; Shaft No. 3, Gypsy Grove; Shaft No. 4, Gypsy Grove; Shaft No. 5.

In the Second Anthracite District in 1887, the PCC had the following collieries, all in Luzerne County (with the exception of Shaft No. 13 and the Old Forge Shaft): Barnum Shaft No. 1 (Mercy Township), Barnum Shaft No. 2 (Mercy Township), Laws Shaft (Pittston Township), Shaft No. 13 (Old Forge Township), Old Forge Shaft (Old Forge Township), Shaft No. 9 (Hughestown borough), Shaft No. 10 (Hughestown borough), Shaft No. 10 Jr. (Hughestown borough), Abbott's Slope (Hughestown borough), Shaft No. 1 (Hughestown borough), Shaft No. 8 (Hughestown borough), Slope No. 4 (Jenkins Township), Shaft No. 7 (Jenkins Township), Shaft No. 5 (Jenkins Township), Shaft No. 6 (Jenkins Township), Shaft No. 11 (Jenkins Township), Shaft and Slope No. 14 (Jenkins Township), and Hoyte Shaft (Jenkins Township).

In an article by Rudy Kuntz titled "Dunmore Coal Companies and Breakers" that was published in *The Gazette* of the Dunmore Historical Society, Volume 3, Number 7, December 2011, pp. 4-5, we read the following about the Dunmore Breakers that were operated by the Pennsylvania Coal Company:

"Dunmore Breakers operated by the Pennsylvania Coal Company included **Bunker Hill Breaker** in the fifth ward; **Gypsy Grove No 3**, located north of Prospect Street in the first ward. The Gypsy Grove mine shaft was opened in 1857; **Penna. Coal Co. No. 1**, located between the Gypsy Grove Breaker and N. Blakely Street, the shaft opened in 1885 and the breaker completed in 1888; **Penna. Coal Co. No. 4**, located at Gypsy Grove, **Penna. Coal Co. No. 2**, located between Third Street and Prescott Avenue in the third ward; **Penna. Coal Co. No. 5**, located west of Dudley Street behind Town Hall in the sixth ward, the mine shaft opened in 1882 or 1883 and the breaker completer [sic] in 1884. / The Spencer Coal Company operated the Spencer shaft (aka Roaring Brook shaft) off E. Drinker Street, a few blocks from the Dunmore corners, that was connected eastward up the Spencer slope to the **Spencer Colliery**. The Spencer mine shaft was opened in 1855 by Edward Spencer and was known as the Roaring Brook mine, the oldest in Dunmore. There was also a **Spencer Breaker** on Mead Street. These were operated by A. D. and F. M. Spencer. Andrew D. Spencer (c1839) was the son of Edward & Elizabeth (De Ved) Spencer. Elizabeth died in 1846. Frank M. Spencer (c1859) was the son of Edward & Susan (Hinds) Spencer. / Carney and Brown Coal Company operated the **Carney & Brown Colliery**, on Jessup Street. This was also called the **Murray Breaker**. In 1891 A. J. and M. J. Murray, George Jackson and Thomas Brown were in the coal business in Dunmore, when John Carney purchased the share of Mr. Jackson. In 1902 Mr. Carney and Mr. Brown bought the interest of the Murrays, from which time the firm was known as Carney & Brown. The colliery was opened in 1885. John Carney was General Superintendent of the Carney and Brown Coal Company. His brother-in-law Michael J. Murray was General Superintendent of the Northern Anthracite Coal Company. Another brother-in-law was Anthony J. Murray. The Carney and Brown Coal Company later became the Meadowside Coal Company. / Some other listings include the **DePuy Breaker**, at Mead and Lane Streets. The DePuy Coal Company was operated by Harry DePuy. / There was a **Nay Aug Coal Company Breaker**,* located 900 feet south of the Spencer Breaker on Mead Street, on the Roaring Brook. The Nay Aug No. 4 Coal Company was organized in March 1908. This later became the Maco Coal Company. . . The Nay Aug Coal Company operated the **Gibbons and Nay Aug Collieries**. / **John J. Boland & Company** had a breaker on Jessup Street near Laurel Lane. / The **Thomas F. Quinn Breaker** and mine was [sic; "were"] located on Mead Street between Smith and Foot Streets."

* More on the Nay Aug Coal Company: *PABRLC*, pp. 1041-42: "WILLIAM J. HAND is president of the Nay-Aug Coal Company, operating in Dunmore." William J. Hand, born in Scranton, July 26, 1866, was a son of the Honorable Alfred Hand.

1893

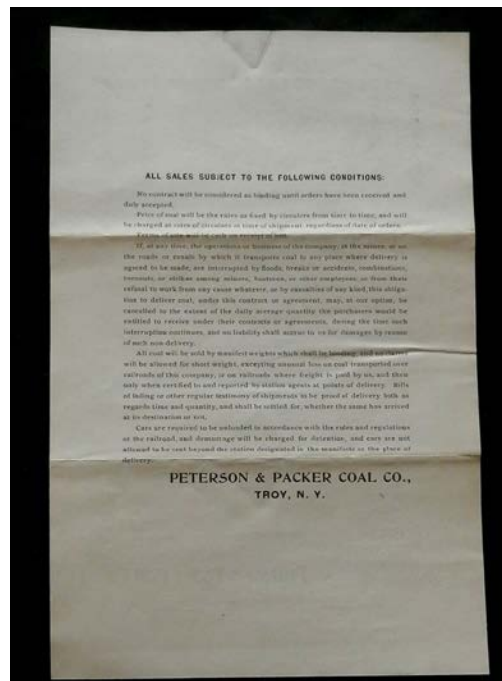
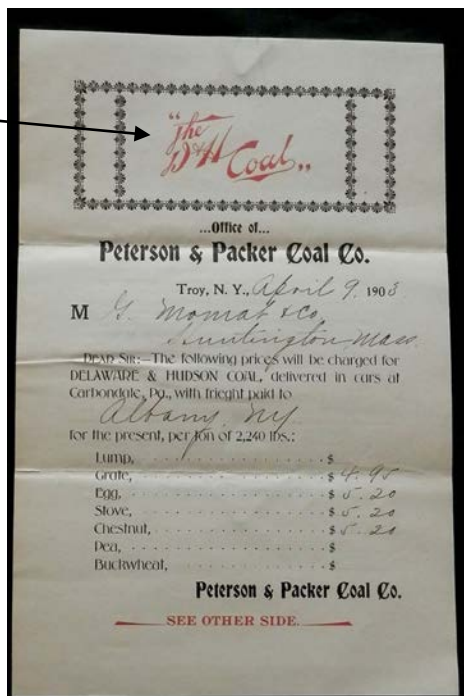
Peterson & Packer Coal Company, Troy, NY

The flyer and envelope shown below were sold on E-Bay April 11, 2016:

Note "The D&H Coal" hand stamp on the envelope.



"The D&H Coal"



"The D & H Coal,"

...Office of...

Peterson & Packer Coal Co.

Troy, N. Y., *April 9, 1908*

M

*G. Mowat & Co.
Huntington, Mass.*

DEAR SIR:—The following prices will be charged for
DELAWARE & HUDSON COAL, delivered in cars at
Carbondale, Pa., with freight paid to

Albany, N.Y.
for the present, per ton of 2,240 lbs.:

Lump,	\$
Grate,	\$ 4. 95
Egg,	\$ 5. 20
Stove,	\$ 5. 20
Chestnut,	\$ 5. 20
Pea,	\$
Buckwheat,	\$

Peterson & Packer Coal Co.

SEE OTHER SIDE.

"...The following prices will be charged for DELAWARE & HUDSON COAL, delivered in cars at Carbondale, Pa., with freight paid to Albany, NY...."

ALL SALES SUBJECT TO THE FOLLOWING CONDITIONS:

No contract will be considered as binding until orders have been received and duly accepted.

Price of coal will be the rates as fixed by circulars from time to time, and will be charged at rates of circulars at time of shipment, regardless of date of orders.

Terms of sale will be cash on receipt of bill.

If, at any time, the operations or business of the company, at the mines, or on the roads or canals by which it transports coal to any place where delivery is agreed to be made, are interrupted by floods, breaks or accidents, combinations, turnouts, or strikes among miners, boatmen, or other employees, or from their refusal to work from any cause whatever, or by casualties of any kind, this obligation to deliver coal, under this contract or agreement, may, at our option, be cancelled to the extent of the daily average quantity the purchasers would be entitled to receive under their contracts or agreements, during the time such interruption continues, and no liability shall accrue to us for damages by reason of such non-delivery.

All coal will be sold by manifest weights which shall be binding, and no claims will be allowed for short weight, excepting unusual loss on coal transported over railroads of this company, or on railroads where freight is paid by us, and then only when certified to and reported by station agents at points of delivery. Bills of lading or other regular testimony of shipments to be proof of delivery both as regards time and quantity, and shall be settled for, whether the same has arrived at its destination or not.

Cars are required to be unloaded in accordance with the rules and regulations of the railroad, and demurrage will be charged for detention, and cars are not allowed to be sent beyond the station designated in the manifests as the place of delivery.

**PETERSON & PACKER COAL CO.,
TROY, N. Y.**

1894

Pierce Coal Company

The office of the Pierce Coal Company was in Archbald. The breaker, erected by Filer & Livy in 1872, at a cost of about \$50,000, was in Winton Borough.

About the Pierce Coal Company and its Operations:

"*The Pierce Coal Company's Breaker* [Winton Borough] was erected by Filer & Livy in 1872, at a cost of about \$50,000, and sold to its present owners in 1877 for \$22,000, the purchase including eighteen acres. The coal is mined from drifts in Archbald some two miles north of the breaker, the mine being connected with it by a railroad. The workings extend about a mile and a half from the opening, and one shaft has been sunk ninety two feet. The vein worked is the Archbald, nine feet thick. The total number of men and boys employed is 237. Two mine locomotives are in use, and one breaker and two pair of hoisting engines. The capacity of the breaker is 800 tons daily; average production about 500 tons. Operations were commenced in December, 1877, and to January 1st, 1880, the total shipments were 170,000 tons. The company bought eleven hundred acres from the heirs of Charles Wirtz, of Philadelphia. It has invested about \$90,000 in lands, workings and working plant. The office of the company is at Archbald. Its incorporators were Edward Jones, J. Hosie, H. B. Phelps and H. S. Phelps."

From *1880* (p. 464C) we know that in 1878, David H. Jones became the mine foreman for the Pierce Coal Company:

"DAVID H. JONES, born in Aburysdith, Wales, in 1842, has worked in mines since childhood. He came to Scranton, Pa., in 1863, and worked in the Von Storch shaft until 1878, when he accepted the position of mine foreman for the Pierce Coal Company at this place [Archbald]. He married (July 3d, 1864) Ann Elizabeth Roberts, of Danville, Pa., and has three children living. He has made a specialty of mining and mine engineering."

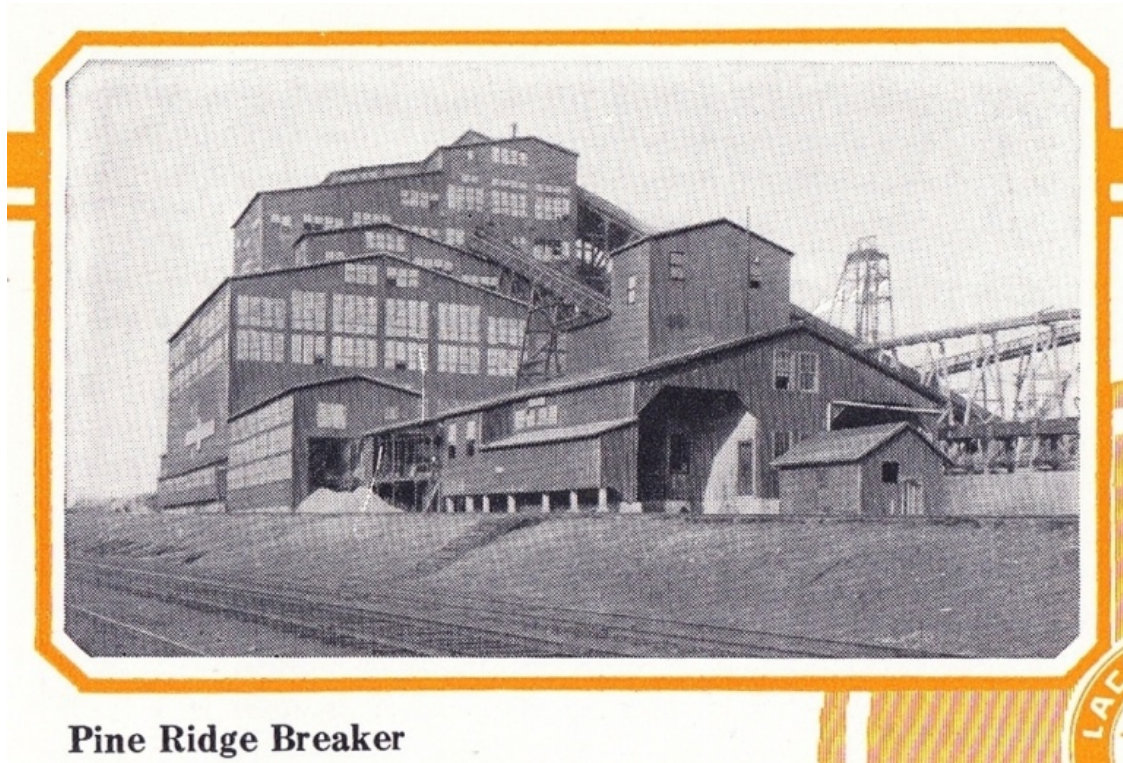
In 1878, John Hosie became a partner in the Pierce Coal Company at Winton. In 1880 he was the general manager of the Pierce Coal Company. (*1880*, p. 438J)

1895

Pine Ridge Shaft

The Pine Ridge Colliery was a D&H colliery in the Wilkes-Barre district. It is listed in *The Anthracite Coal Fields of Pennsylvania with their Outlets to Market* by Geo. B. Strauch and A. B. Cochran, Mining Engineers, Pottsville, PA, 1878: Under the heading "LEHIGH AND THIRD, NORTHERN OR LUZERNE COAL FIELDS, Third or Luzerne Coal Field. Western or Wilkesbarre District," the following Delaware and Hudson C. Co. collieries are listed: Mill Creek, Pine Ridge, Laurel Run, Baltimore No. 1, Baltimore No. 3, No. 2 Plymouth, No. 3 Plymouth, No. 4 Plymouth, No. 5 Plymouth.

Here is the photograph of the Pine Ridge Breaker that is given in the Hudson Coal booklet, 1929:



The following accidents at Pine Ridge Breaker are listed in *Report of Inspectors of Mines*, 1879:

p. 43: On November 26, Michael Cawley, a miner, age 37, married, with five children, was in a non-fatal accident (ribs fractured and spine injured by a fall of top coal) at the Pine Ridge Colliery. On December 8, Martin O. Bromky, a door boy, age 15, was in a non-fatal accident (badly bruised by car knocking the door on him) at the Pine Ridge Shaft.

p.160: On March 4, at the Pine Ridge Colliery, Josiah Eddy was in a non-fatal accident (one hand, and leg badly bruised and cut by premature explosion of a blast). On March 10, at the same colliery, John Kaytes was in a non-fatal accident (leg broken by car running down slope, he being in said car against the law)

p. 161: April 21, at the Pine Ridge Colliery, John Gratton was in a non-fatal accident (head and leg injured by fall of coal). On April 30, at the same colliery, Martin Hogan was run over by a loaded car, arm cut off and hip dislocated.

1896

Plymouth Collieries, Nos. 1, 2, 3, 4, 5

These five D&H collieries were at Plymouth, Third Anthracite Mine District.

The following accidents at these Plymouth collieries are listed in *Report of Inspector of Mines*, 1879:

p. 67: April 29, John Geake, a miner, age 25, unmarried, was in a non-fatal accident (back and left leg bruised by fall of rock) at Plymouth Shaft No. 2 Colliery. May 7, Herman Lutz, a miner, age 30, married, was in a non-fatal accident (one rib fractured and bruised on back and on abdomen by a fall of rock) at the same colliery. May 30: James Monahan, a driver, age 15, was in a non-fatal accident (severely bruised by being caught under cars) at Plymouth Shaft No. 5 Colliery.

p. 68: July 12, Nathan D. Kusterbauer, a miner, age 28, not married, was in a non-fatal accident (face and hands severely burned by an explosion of powder) at Plymouth Shaft No. 5.

p. 74: Plymouth No. 2, one breaker; 49 mules in use, inside and outside; actual number of miners, 93. Plymouth No. 4, one breaker; 19 mules in use, inside and outside; actual number of miners, 54. Plymouth No. 5, one breaker; 42 mules in use, inside and outside; actual number of miners, 71. [emphasis added]

p. 160: On March 12, at Plymouth No. 2, Ed Kinney, laborer, was injured, not seriously, by a fall of roof, at the same time that his miner, Thomas Ruthford, was killed. On June 16, at Plymouth No. 2, Henry Jones was in a non-fatal accident (leg severely injured; car run over it).

p. 161: Plymouth No. 4, on May 5, Thomas O. Keif was in a non-fatal accident (hip dislocated; piece of coal fell on him). On June 13, Barney Brogan was in a non-fatal accident (foot severely injured; car run over it) at Plymouth No. 4.

p. 163: on October 8, at Plymouth No. 2, Hiram Shaffer was injured seriously by a fall of top coal.

p. 164: on October 24, at Plymouth No. 4, John Brogan had a leg broken and back injured, by a piece of slate falling on him.

p. 165: on March 12, at Plymouth No. 2, Thomas Rutherford, age 55, married with two children, was killed instantly by fall of rider coal or roof.

p. 167: At Plymouth No. 5, on July 24, John O'Brien, age 15, was killed by a car going down grade and striking the empty trip, killing a mule and this boy.

p. 168: Plymouth No. 4: December 17, Jac. Boyer, age 42, married with six children, was killed by a fall of coal in his own place.

1897

Powderly Breaker

The Powderly Breaker was in Carbondale. Heading south on Lower Gordon Avenue, in the area where Duffy's Field used to be, the Powderly breaker was to the left.

The Powderly mine, in the south district of Carbondale township, was begun in 1845. It had three drifts.

The Powderly mining operations in Carbondale were started by Terence Powderly (the father of T. V. Powderly), who was an official of the Delaware and Hudson Canal Company. Terence Powderly, the father, died on August 26, 1882. Here is the notice about his death from the *Carbondale Advance*, September 2, 1882, p. 2:

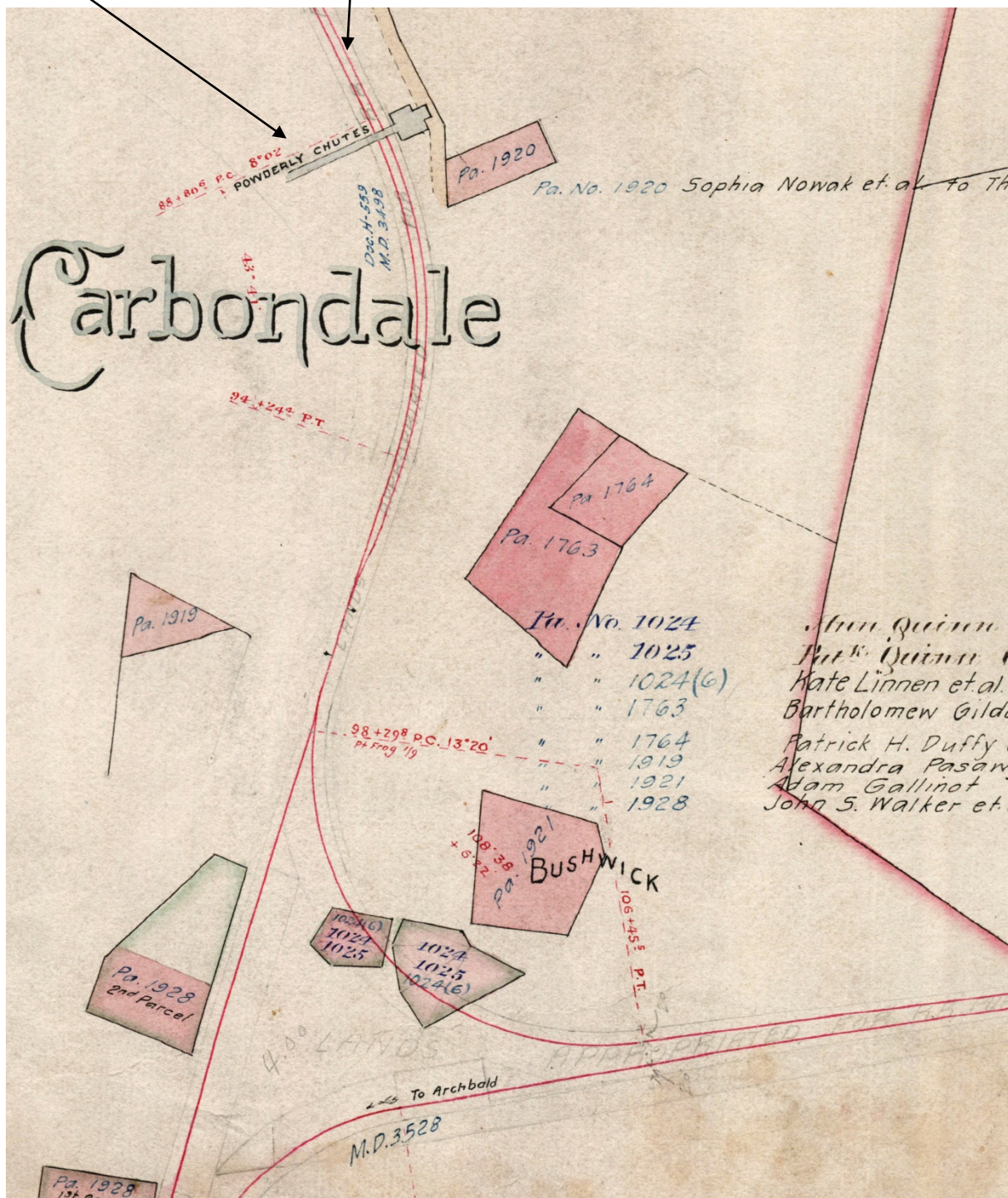
“POWDERLY.—In this city, Sunday, Aug. 26, 1882,* Terrence Powderly, aged 82 years. / When he became a resident of the then young town, now the city of Carbondale, in the year 1837, Terence Powderly was one of its most respected and influential citizens. Of commanding form and noble presence, and with the most honorable traits of character, he was looked up to by all classes, as one of our first and best men. / He was one of the bosses of the Delaware and Hudson Canal Co., and no one enjoyed more fully its confidence and respect. / He raised an interesting family, all occupying good positions, and the youngest son, Hon. T. V. Powderly, is now in his second term as Mayor of the city of Scranton, and has also been nominated by a respectable political party for Governor of the Commonwealth.”

*In *Portrait and Biographical Record of Lackawanna County*, 1897, p. 131, in the biographical portrait of Terrence's son, Patrick A. Powderly, the date of his death is incorrectly given as May 27, 1882.

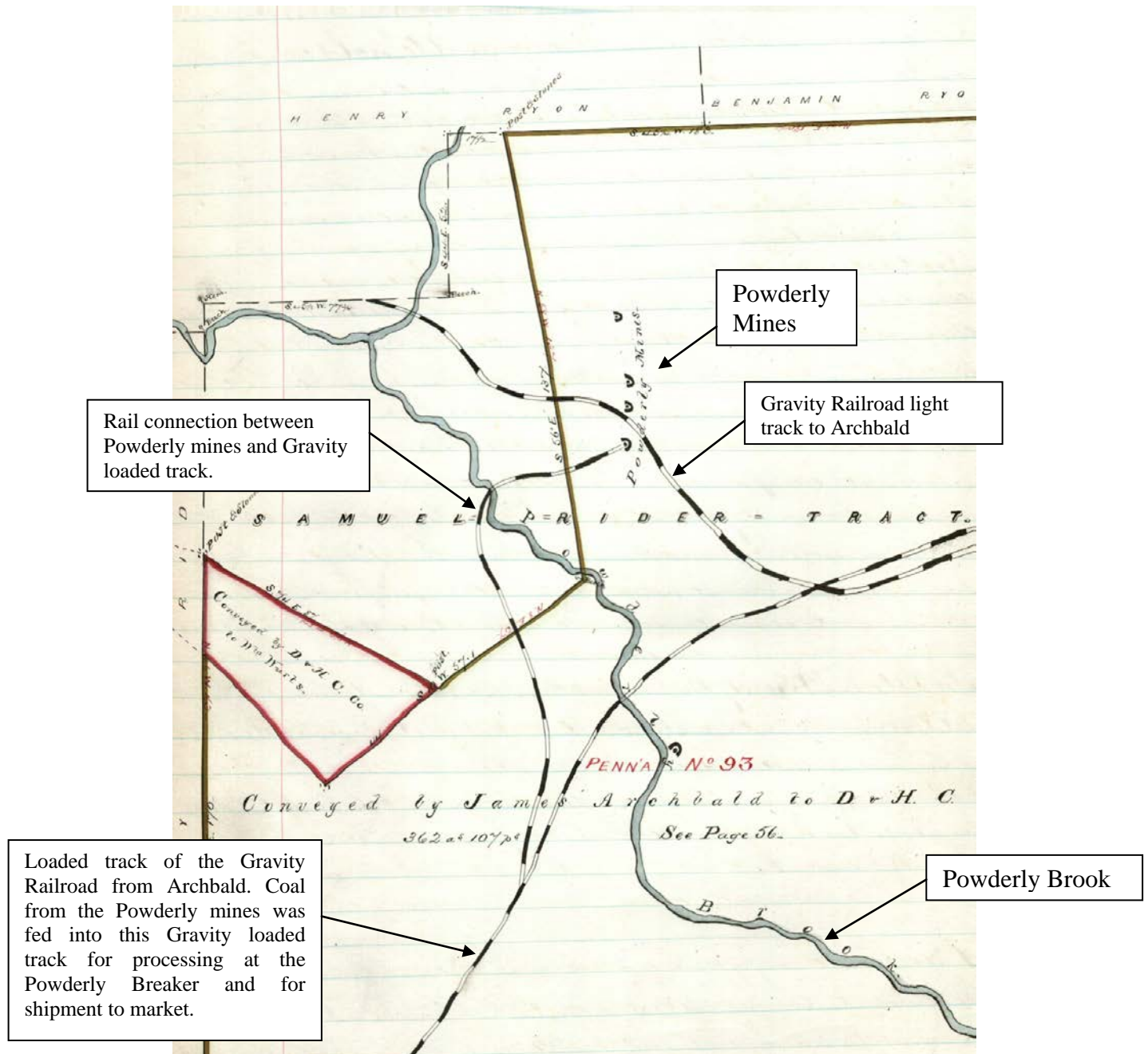
The Powderly Chutes in Carbondale are shown on the detail given below from the 1901 D&H Honesdale Branch map:

Powderly Chutes

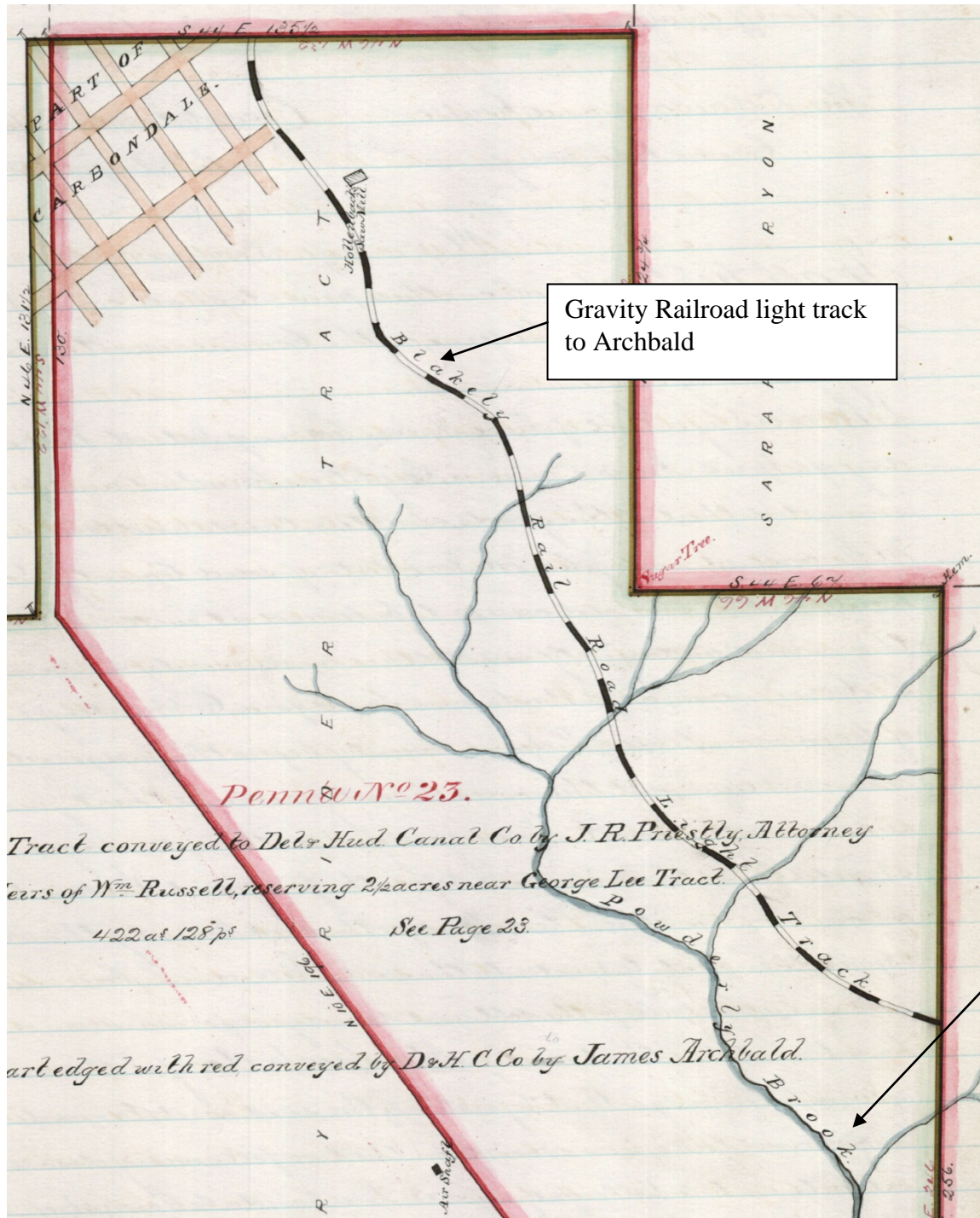
Level No. 27 on the D&H Gravity Railroad



In the *D. & H Map Book – Luzerne*, p. 58, there is a map that illustrates the deed, pp. 56-57. dated May 23, 1849, between James Archbald and wife and The Delaware & Hudson Canal Company. On that map, the Powderly Brook and the four Powderly mines are shown. Here is that map:



Here is another look at Powderly Brook, from the map on p 25 of *D&H Deeds Luzerne I.* This map illustrates the deed, dated August 29, 1839, between Joseph R. Priestly Atty in fact and The Delaware & Hudson Canal Company; deed on pages 23-24.



On August 9, 1858, a young girl who was riding on a train over Powderly's high work fell through to the ground and fractured a limb. Here is the report on this accident that was published in the *Carbondale Advance* of August 14, 1858, p. 3:

"A young girl, riding on Monday upon a train over Powderly's high work fell through the road to the ground below, and fractured a limb."

On January 1, 1873, Mrs. Mary Walker was walking on the loaded track of the Gravity Railroad in the area of Powderly's mines and was run over and literally torn to pieces by the cars. In the *Carbondale Advance* of January 4, 1873, we read:

"Death by the Cars. / A shocking death occurred upon the Railroad just below town on New Year's day. / Mrs. Mary Walker, widow of James Walker formerly of Carbondale township, while returning to her home near Powderly's mines and walking upon the R. R. track, met a train of loaded cars. Not getting out of the way in season, she was run over and literally torn to pieces, causing instant death." (*Carbondale Advance*, January 4, 1873, p. 3)

On Thursday, June 17, 1875, an eighteen year old boy named Thomas Walker, who lived in the vicinity of Powderly's mines, was riding on the coal cars on his way home from a circus when the train was derailed and Walker's head was jammed between the third and fourth cars, killing him instantly. Here is the report on this tragic accident that was published in the *Carbondale Advance* of June 19, 1875:

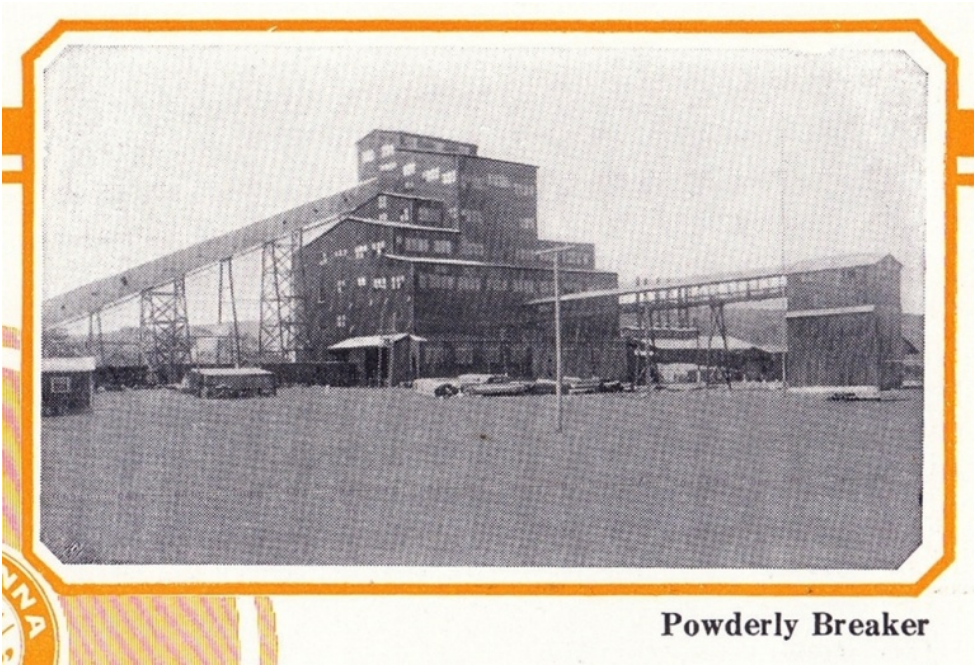
"Fatal Accident. / As Thos Walker, living in the vicinity of Powderly's mines, was returning home on the coal cars after the circus on Thursday, he met his death in the following manner: / A little way below Yarrington's mill, a stone on the track threw off the train. Young Walker was on the third car, and when the collision came his head was jammed between the third and fourth cars, killing him instantly. He was about eighteen years of age." (*Carbondale Advance*, June 19, 1875, p. 3)

Here is the Delaware and Hudson Canal Company section (p. 165) of Table No. 7 of the *1877 Mine Inspectors Reports*, in which precise data are reported on the collieries owned and operated by the D&H at that time.

Delaware and Hudson Canal Company

NAME OF COLLIERY.	SHAFTS.					SURFACE SLOPES.				UNDERGROUND SLOPES.				Total depth of mines in feet.	ELEVATION.		TOTAL OPEN'GS.			Number of coal breakers.
	Number of.	Length in feet.	Width in feet.	Depth in feet.	Elevation of head ab. tide-water, in feet.	Number of.	Length in feet.	Vertical depth in feet.	Elevation of head ab. tide-water, in feet.	Number of.	Length in feet.	Vertical depth in feet.	Elevation of head ab. tide-water, in feet.		Of bottom above tide-water, in feet.	Of bottom below tide-water, in feet.	Shafts.	Slopes.	Drifts and tunnels.	
Von Storch slope,	2	30	10	540	1,177	1	225			1	350			540	560		2	1		1
Leggett's Creek shaft,	2	24	10	340	789					1	300	15	449	355	434		2			1
Marvine shaft,	1	44	10	330	742									330	412		1			1
Eddy Creek shaft,	2	27	10	408	782					1	450			408	377		2			1
No. 1 and No. 2 colliery, Olyphant,*	2	23	10	386	785														2	1
Grassy Island shaft,	2	14	10	170	879					2	500	16	633	291	617		2			1
White Oak colliery,	2	24	10	275	908						300									
Powderly colliery,*	2	7	7	90	1,022					1	1,050			90	1,022		2		1	1
No. 1 shaft and W. B. tunnel,	1	11	11	89	998	1	450	65	998					80	900		1	1	1	1
No. 3 shaft,	2	10	10	30	1,073									70	952		2			1
Coal Brook colliery,	3	8	8	25																
		10	7	50	1,200						275									
		8	8	40						2	400			50	1,150		3		5	1
Totals,	17					2				8							17	2	9	10

Here is a photograph of the Powderly Breaker from the Hudson Coal booklet, 1929:



The photograph of the Powderly Breaker that is given below (copy of the original by Mike Zrowka) was published in the July 1, 1979 issue of a Scranton newspaper. The original title on this photograph is:

“Flag raising ceremony at the Powderly Breaker of the Hudson Coal Company in Carbondale PA in May 1917”



Here is a typescript of the caption:

“The Hudson Coal Company held a war bond drive for World War I with speeches at the Powderly Breaker, Carbondale. Some of those identified in photo were: Colonel Frank Kelly, Spanish American War; Judge Maxey, Olwyn Evans, Thomas Brown, James Carey, Charles Arnold, David Davies, James Williams, Thomas Williams, William Lewis, Harry Jones, Abraham Jacobs, John Lewis, David Lewis, William Davidson, Alice Bates Isger William Martin, John Jacobs, Atty. E. A. DeLaney and Frank Roemmelmeyer.”

The following information is also known about this photograph:

Edward R Owens, bugler of the 110th Coast Artillery at Fort Adams, Rhode Island, sounded the call to colors, and the Mozart Band, at right, led by Frank Roemmelmeyer, played *The Star Spangled Banner*. The flag was pulled to the top of an 85-foot flag pole.

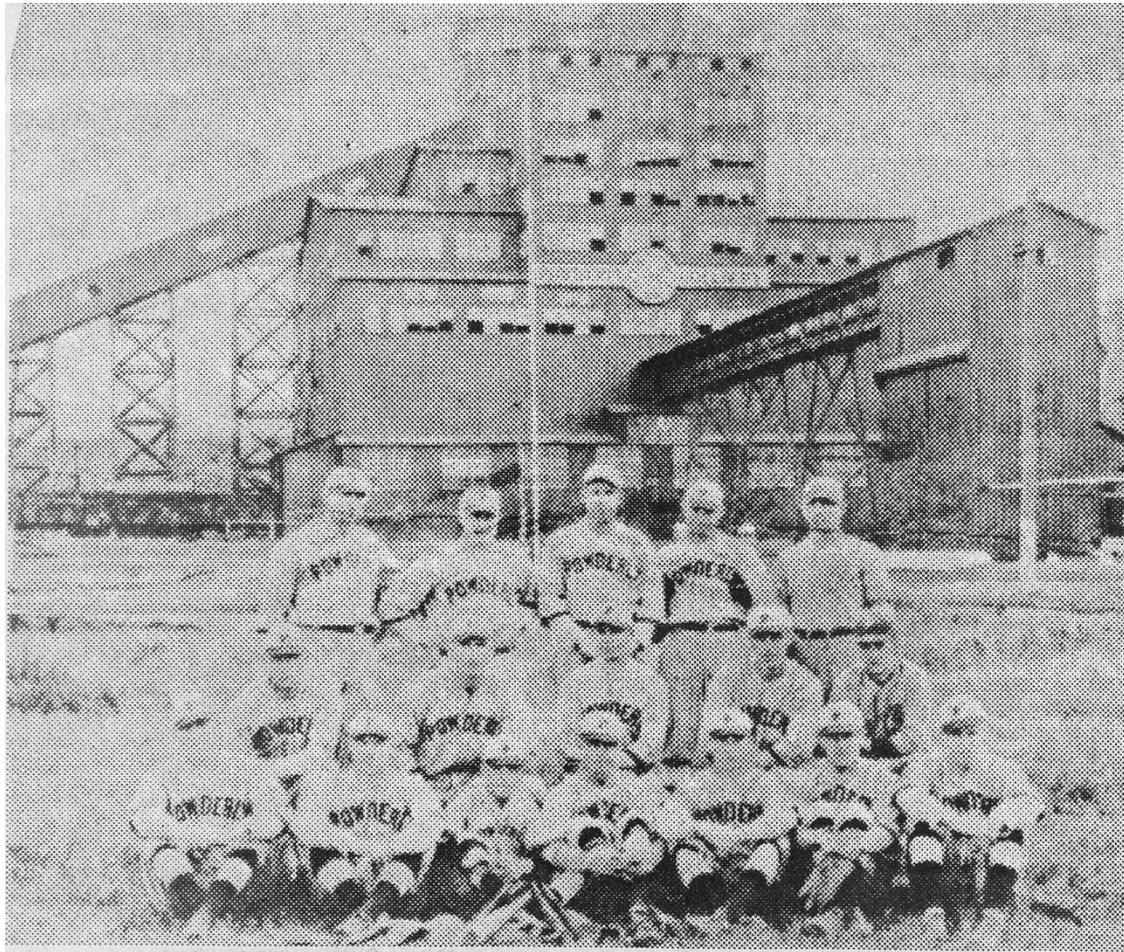
The post card photograph of the Powderly Colliery that is shown below is in the collection of the Carbondale Historical Society.



Powderly Colliery, Carbondale, Pa.

Shown below is a newspaper clipping in the archives of the Carbondale Historical Society about the Powderly Colliery baseball team (Industrial League), in the 1920s. The faces of the team members are largely unreadable. The real value of the clipping is the caption, in which the names of the Powderly Colliery Industrial League members in the 1920 are given.

Powderly Colliery Baseball Team Industrial League, 1920s:



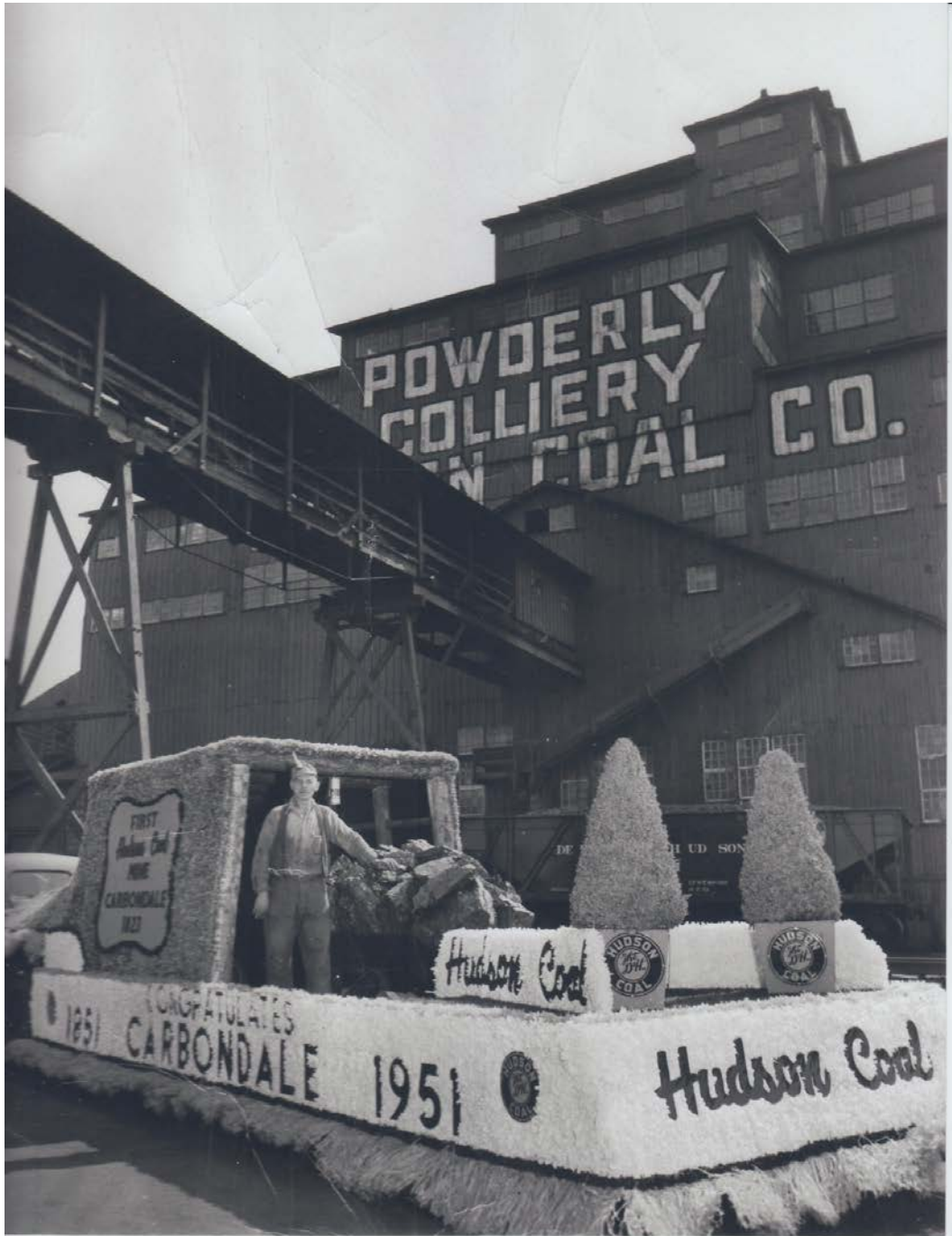
NOSTALGIA — The Powderly Colliery Industrial League of the 1920s included, left to right: first row - James Buckle, Scharstrauber, Thomas Beahan, Ray Ingram, Thomas Moran, Ambrose Kelly, Billy Walker; second row -

Max Bolash, John Osborne, Ken Morison, Rollie Cannon, John Siddons; third row - James Munley, Cawley, Michael Munley, Michael Walsh, F. Lanke. (Submitted by John Osborne, Waymart)

Powderly Colliery Baseball Team Industrial League, 1920s:

Typescript of caption on photo shown above: “NOSTALGIA – The Powderly Colliery Industrial League of the 1920s included, left to right: first row – [J]ames Buckle, Scharstrauber, Thomas Beahan, Ray Ingram, Thomas Moran, Ambrose Kelly, Billy Walker; second row – Max Bolash, John Osborne, Ken Morison, Rollie Cannon, John Siddons; third row – James Munley, Cawley, Michael Munley, Michael Walsh, F. Lanke. (Submitted by John Osborne, Waymart)

The Powderly Colliery entered a float in one of the parades that took place in Carbondale at the time of the Carbondale Centennial Celebrations in March 1951. The original copy of the photograph of that float that is shown below was donated to the Carbondale Historical Society in February 2013 by Joe Durso, Carbondale.



Note on rail service to the Powderly Breaker in the twentieth century:

“The Powderly Breaker was served by mine run crew No. 5 from Carbondale, marked at 10:00 A.M., with a 6-man crew. The capacity of the Powderly was less than that of the Marvine or the Loree, but could sometimes produce 125 cars a day. This breaker also used the outside, or "slow," tracks (of the 4) on the Valley Road. On these outside tracks, the mine run crews could store empty cars until needed, and build the outbound loads in a train for movement back to Carbondale.”

The Powderly Breaker was a Hudson Coal Co. breaker, which had a capacity of 6,000 tons of prepared coal daily. At one time, 1,800 men worked there. In 1954, 106 men worked at the colliery. In 1958, the Powderly Breaker was ranked 5th among the 21 major breakers which produced 300,000 tons or more of anthracite. In 1958 the Powderly Colliery produced 718,013 tons of anthracite.

In an article that was published in the *Scranton Times* of March 18, 1962, we read:

“At one time a humming operation employing 1,800 men, the Powderly Colliery, an upvalley landmark between Carbondale and Mayfield, is being razed under contract to the Lou Cohen firm of Wilkes-Barre. Operated until a year ago by the Glen Alden Corp., the colliery previously belonged to the Hudson Coal Co. Deep mines in the vicinity have been worked out, and strip-mining is now going on, with the coal being shipped to the Marvine Colliery in North Scranton for processing. The original breaker was built more than 100 years ago. The larger plant was erected in 1929-30, when a cone-cleaning system was installed. At peak periods, the breaker processed 6,000 tons of anthracite during an eight-hour shift.”

The man who established the Powderly mining operations in Carbondale was Terence Powderly. His youngest son, Terence V. Powderly, became a symbol of the nineteenth-century labor movement. He joined the Knights of Labor in 1876. By 1879, he was elected General and eventually Grand Master Workman of the Knights of Labor. He was elected the first Irish mayor of the city of Scranton, and served three terms, 1879-1884. In 1886 he built his house at 614 North Main Avenue in Scranton and resided there until 1899. He married Hannah Devers, who died in 1901; he then married Emma Fickenscher. He died at age 75 in Washington, DC on June 24, 1924, and is buried in Rock Creek Church Cemetery there.

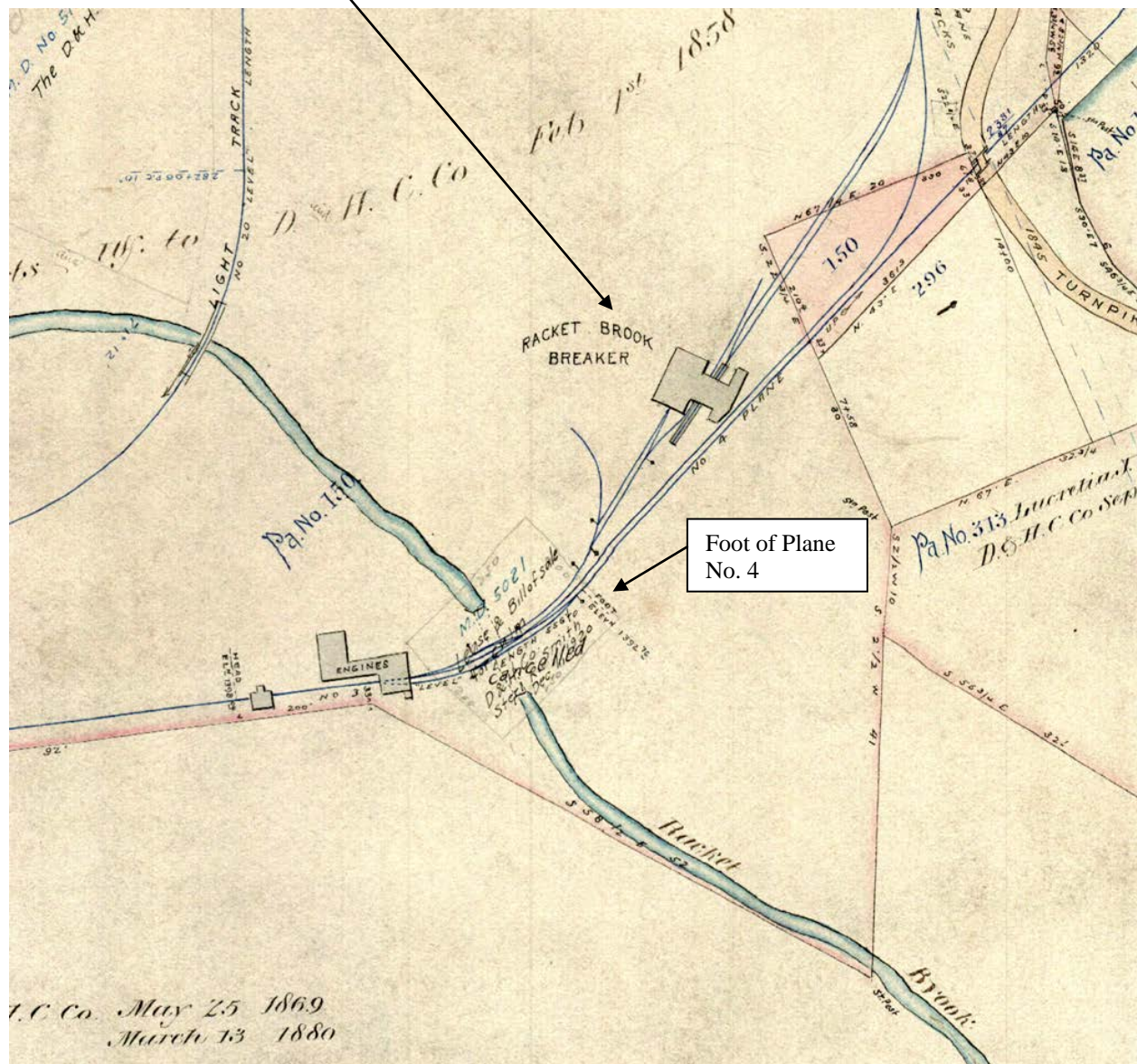
The following biographical portrait of the man was published in the *Carbondale Leader* of June 19, 1885, p. 3:

“SKETCH OF HON. T. V. POWDERLY. / From the *Philadelphia Press*. / Mr. Powderly is yet a young man. Prior to the great strike of 1877 he was comparatively unknown. His fame had birth in that stormy time. When the blood of industrial Scranton was at fever heat one summer’s afternoon, and the State was aglow with passion from end to end, a young, earnest mechanic,

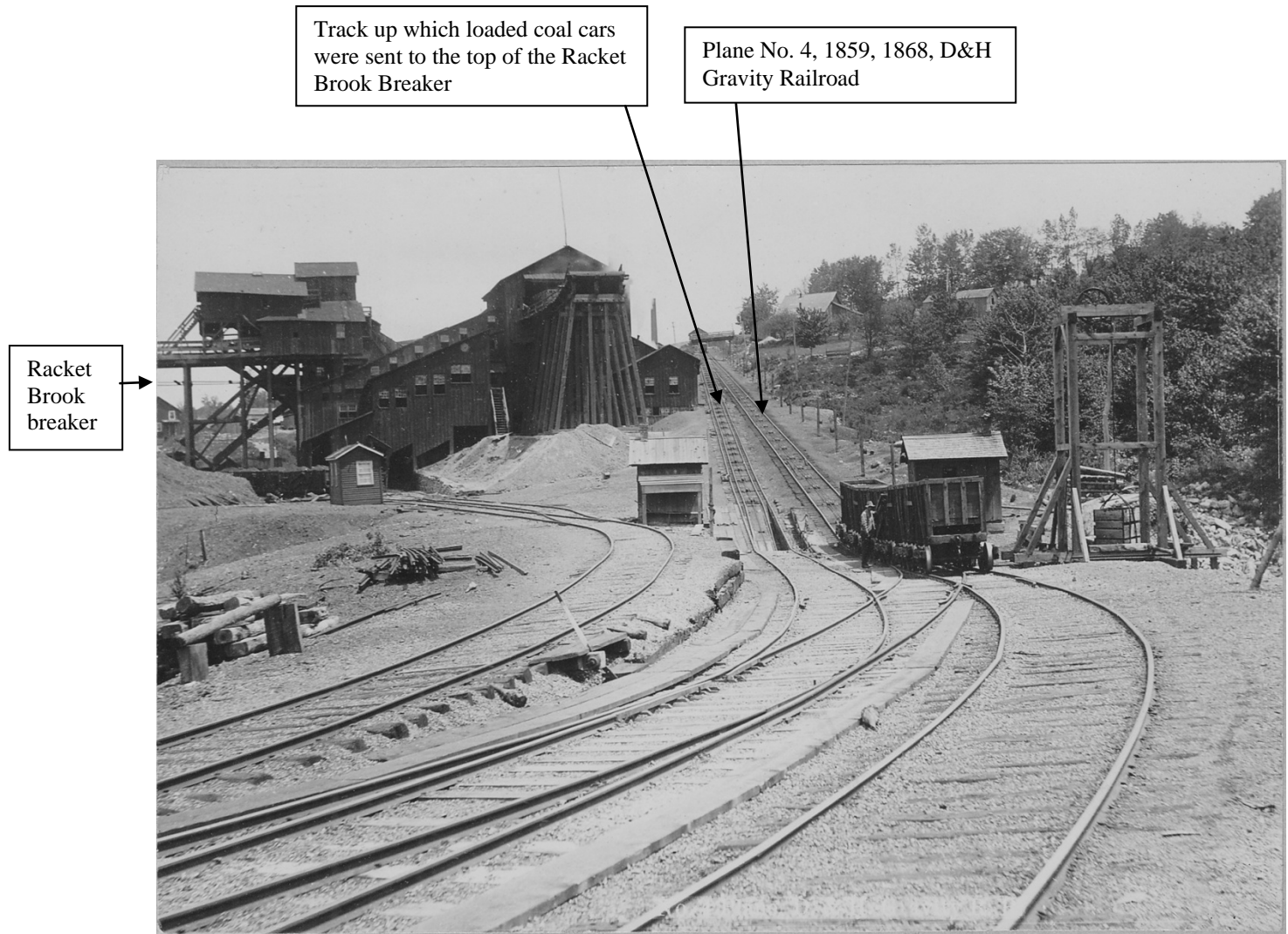
with the grime of the shops on his clothes and a dinner-pail in his hands, might be seen giving prudent counsel to a group of sad and solemn, but determined workmen, on a street corner in Scranton. He spoke after a plain, blunt fashion. There was sincerity in his speech and justice in his opinion, and he was listened to attentively. This was T. V. Powderly, since then three times mayor of Scranton, and six times chief of one of the strongest labor organizations in the world. Mr. Powderly was born in Carbondale, at the head of the Lackawanna Valley, on the 22d of January, 1849. He received the benefit of a common school education, and served an apprenticeship at the machinist's trade under James Dickson, father of the late Thomas Dickson president of the Delaware & Hudson Canal Company. His spare time was devoted to mechanical engineering and drawing, in which he took a deep interest, and succeeded in becoming proficient. At the age of 19 he removed to Scranton, where he joined the Blacksmiths' and Machinists' Union, and was chosen president of the local branch. About ten years ago [1875] he joined the Knights of Labor, and when District Assembly No. 16 was organized he became its secretary. At the recent meeting of the general assembly of the order he was elected its general master workman for the sixth consecutive term. To his executive skill and his untiring energy as an organizer the order is mainly indebted for its rapid increase of membership and its great power as an arbiter of the disputes which arise from time to time between capital and labor. / He is an entertaining conversationalist, a bright, strong, and humorous writer, and he is opposed to the settlement of labor difficulties by strikes. Nothing pleases him so well as to settle such disputes as arise between employer and employed by arbitration, and he has done a vast amount of good in this particular within the last few years. His views on the curtailment of the hours of labor are forcibly presented in the April number of the 'North American Review,' in an article headed 'The Army of the Discontented.' During the first years of his connection with the labor movement, Mr. Powderly suffered much from a cruel system of black-listing, which drove him from shop to shop and from town to town in search of work. 'I was a good mechanic,' he said, in referring to the matter some time ago. 'I was sober, I was attentive, and wherever I went my work gave satisfaction, but just as soon as I was fairly settled in a place I was black-listed, because of my connection with the labor societies, and my employer invariably told me he was sorry to part with me, but that there was no alternative.' While condemning the system, Mr. Powderly cherishes no personal resentments toward those who persecuted him in that manner, and he does not permit personal considerations of any nature to interfere with impartial discharge of his duty. The indications are that the coming struggle in the labor world will be for a reduction of the hours of labor. The great improvements made within a few years in the invention of labor-saving machinery have added largely to the ranks of the unemployed by enabling a few to do the work of many, and it is thought that this can best be counteracted by lessening the hours of labor, and thus enabling the children of toil to participate in the benefits that arise from the world's progress. Mr. Powderly's home life is a model of contentment. His wife is a bright, cheerful, intelligent little woman of a sunny disposition, and although there are many wealthier dwellings than theirs in the United States, few are happier." (*Carbondale Leader*, June 19, 1885, p. 3)

Racket Brook Breaker

Racket Brook Breaker

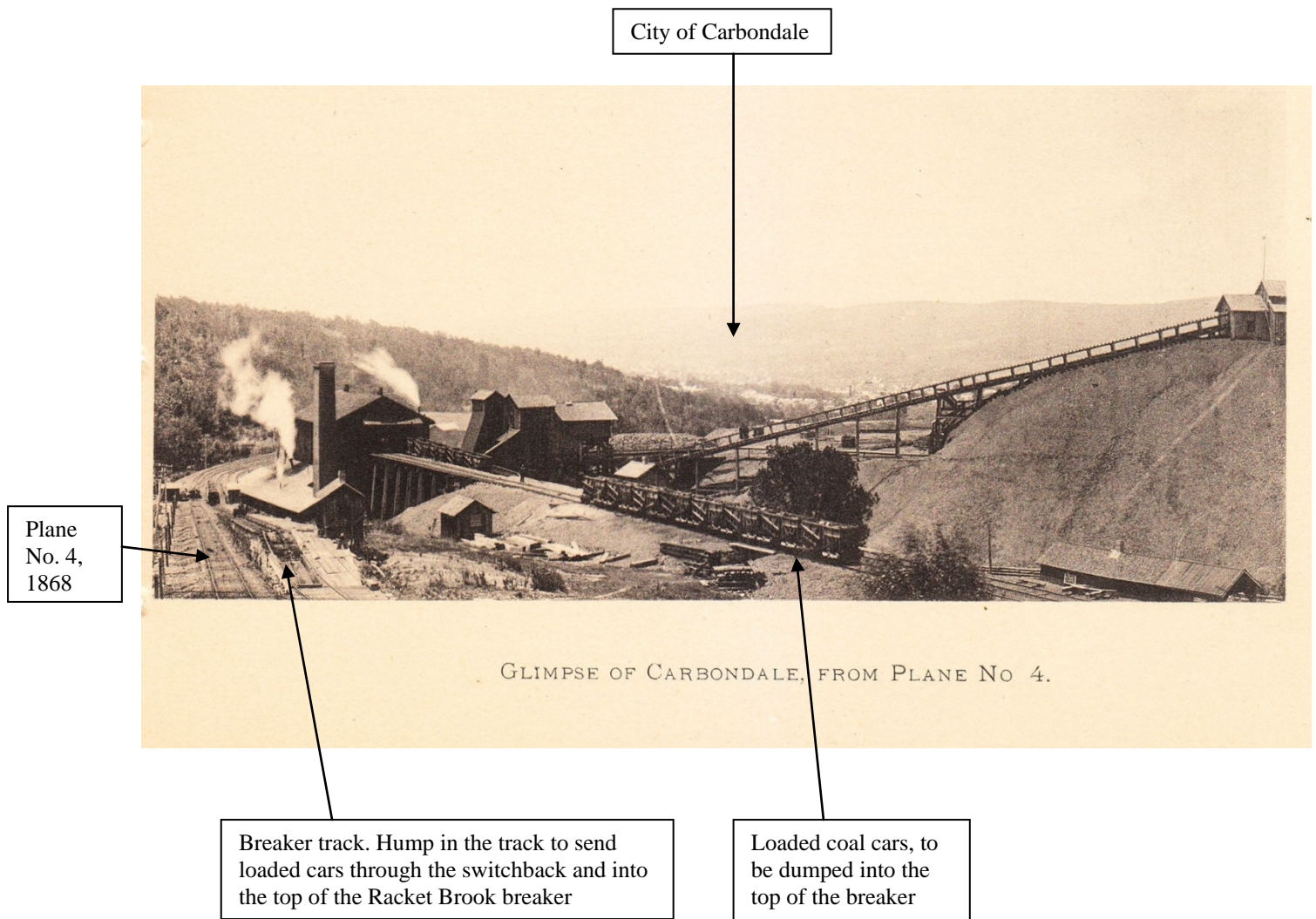


Plane No. 4 on D. & H. Gravity R. R. from *Orig. Photo Souvenir of Del. & Hud. Gravity Road*.
Published by L. Hensel, Hawley, PA.

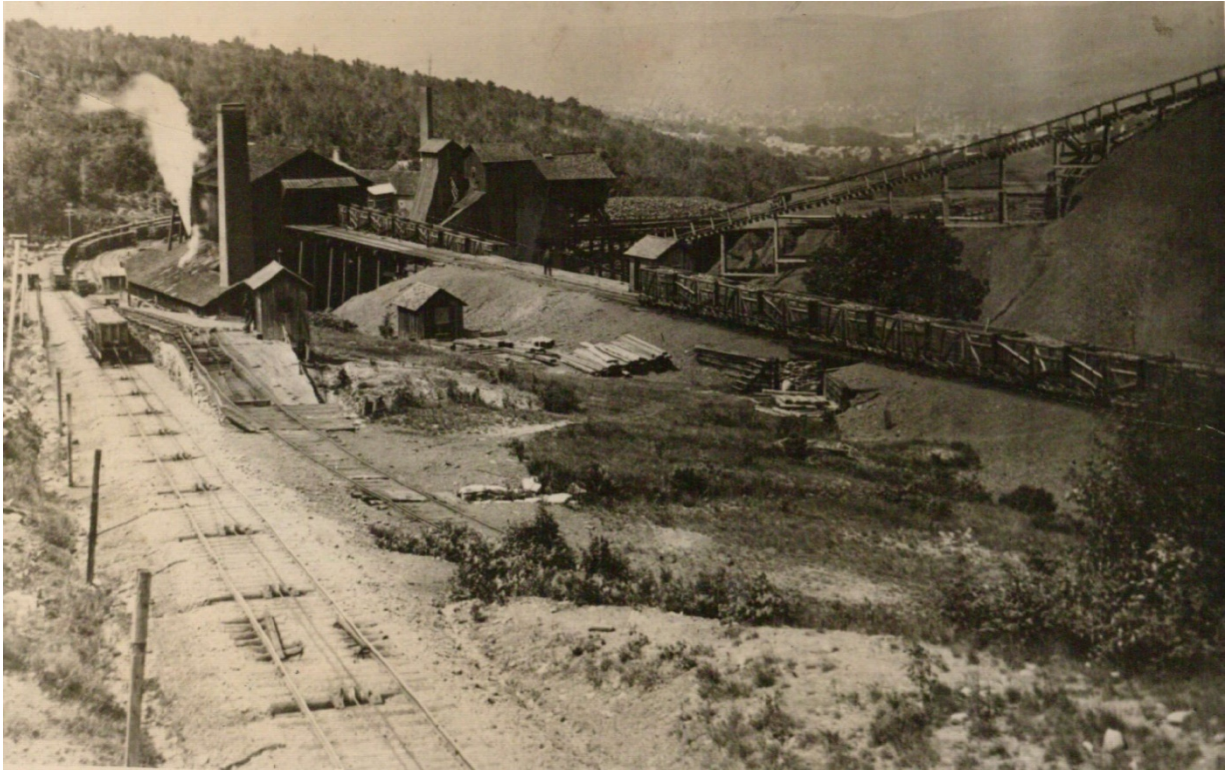


Plane No. 4 on D. & H. Gravity R. R.

Photograph *Glimpse of Carbondale, From Plane No. 4* that is included in *Souvenir of the Gravity Road / Photo-Gravures of the Old Delaware and Hudson Coal and Passenger Road, between Carbondale and Honesdale, Pa.*, published by W. B. Foster, Photographer, Carbondale, Pa. Printed by the Albertype Company, Brooklyn, New York.

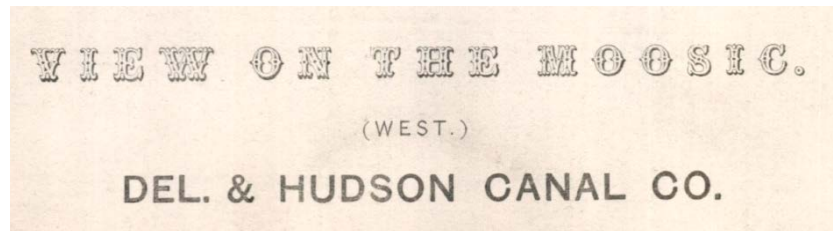


Another view of the Racket Brook Breaker taken from the head of Plane No. 4. This photograph is in the archives of the Pike County Historical Society at Milford, PA.



Photograph in the collection of the Wayne County Historical Society by Johnson, Scranton, PA, 1860.

This photograph was taken above the Racket Brook breaker, looking West.

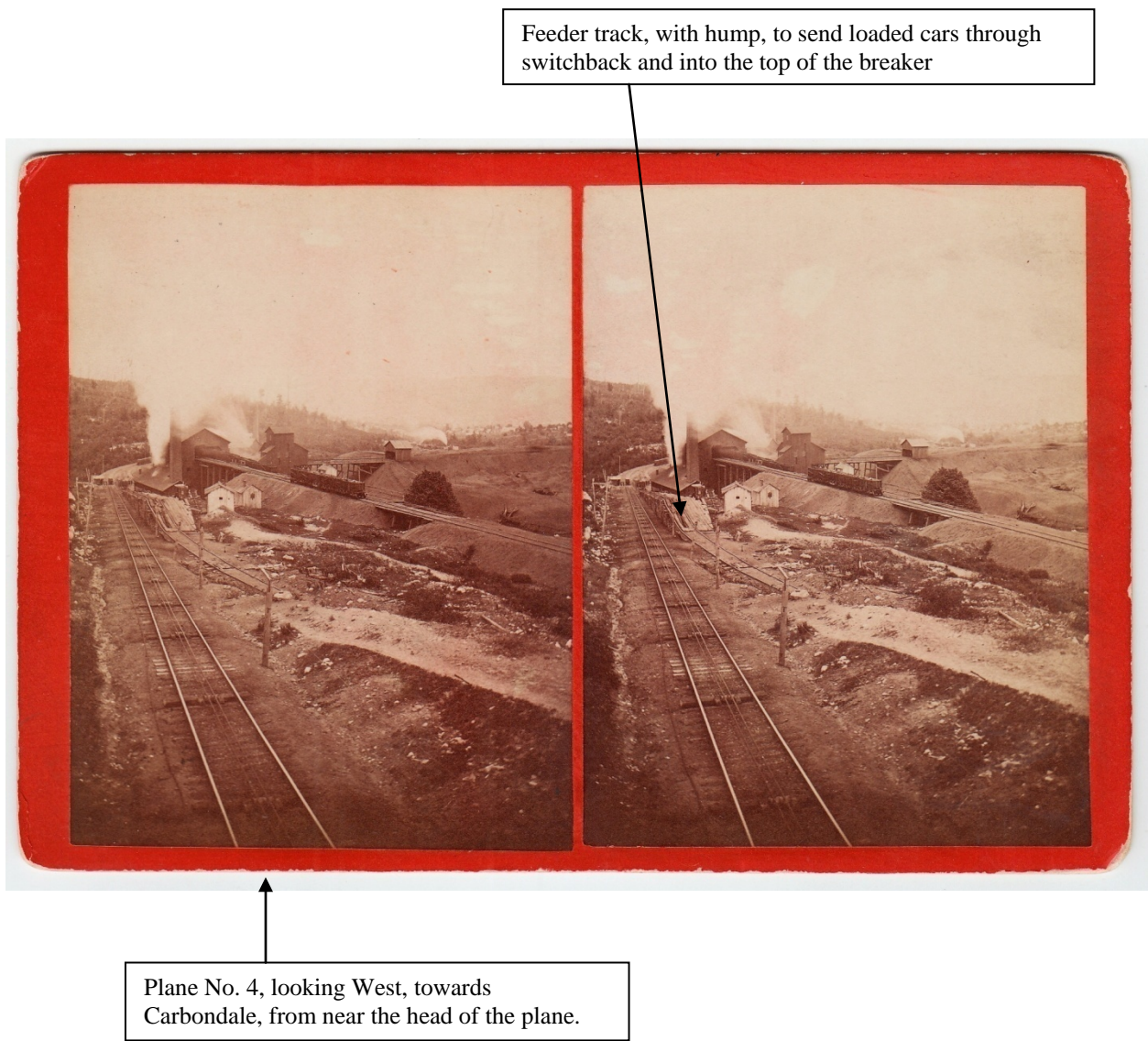


City of Carbondale

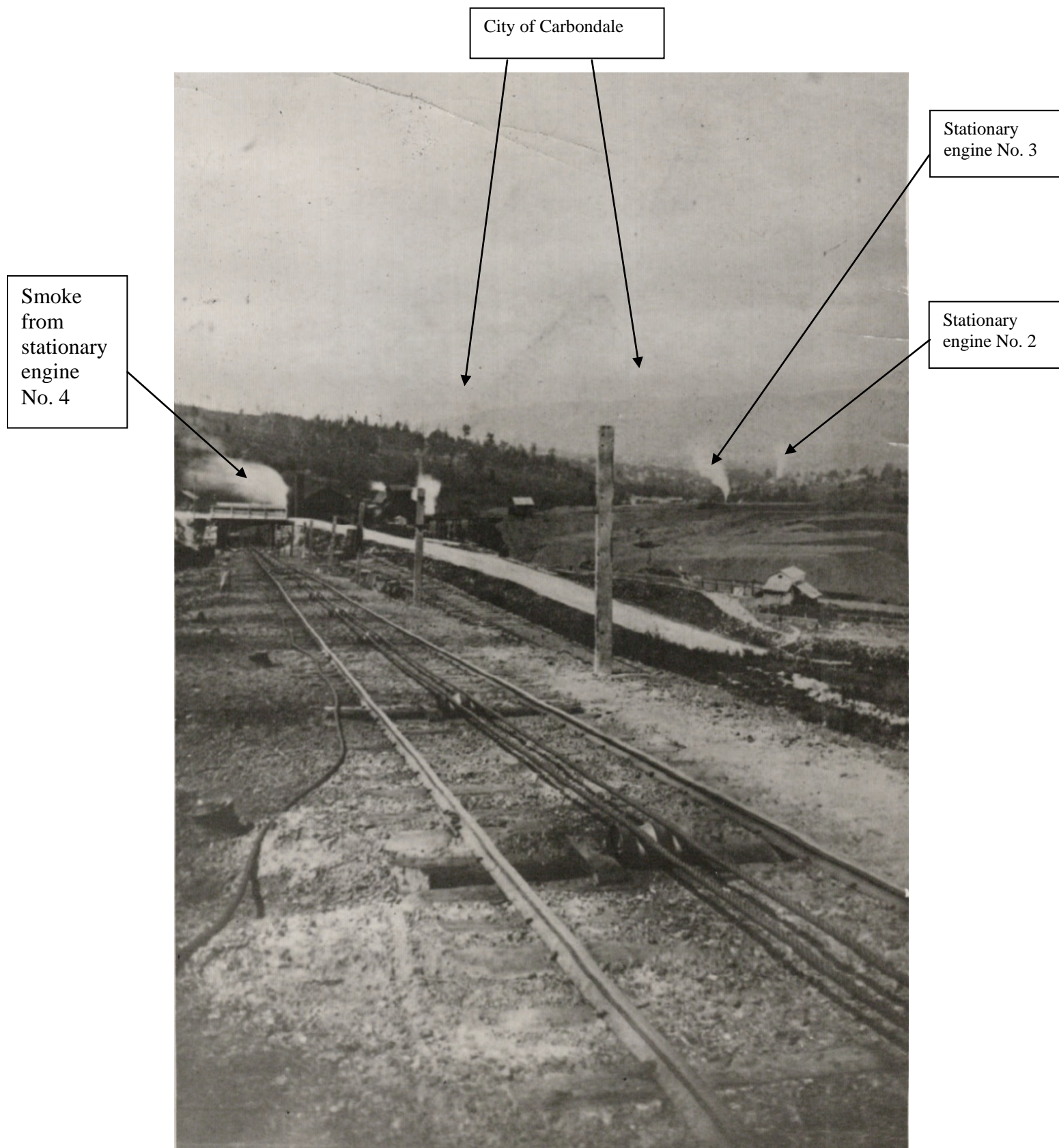


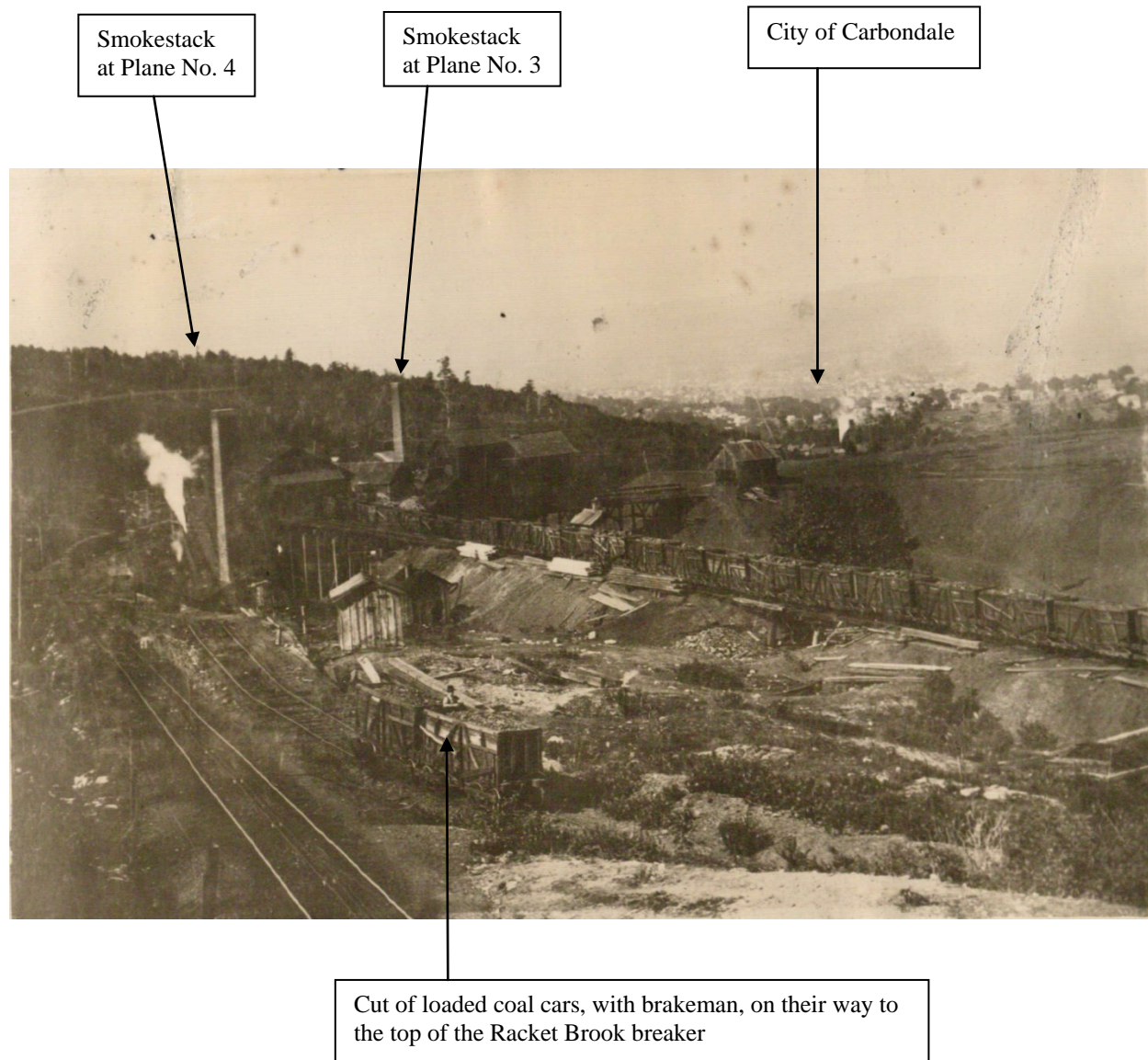
Feeder
track for
loaded
coal cars
to the
top of
the
breaker

Hensel stereocard No. 1148: *View of Carbondale, seen from Plane No. 4*



Two views taken at the head of Plane No. 4, with Carbondale in the valley in the background. These photographs are in the archives of the Pike County Historical Society, Milford, PA.





As we mentioned in the opening pages of this volume, the first breaker in the Northern Coal Field was built in 1852/1853 at the DL&W's Diamond Mine in Scranton. In *Hollister* (pp. 160-164) we read:

“The false economy of breaking up coal by machinery, in the Northern Coal Field, began under the auspices of the Delaware and Lackawanna and Western Railroad Company at the Diamond Mines in Scranton in 1852. / The first Annual report of this Railroad Company[D&H] made January 1854 [emphasis added] says, ‘that during the present year the steam power coal breaker at Diamond Mines (commenced in 1852) has been completed and put into operations. Additional screens and schutes and other apparatus for preparing the coal for use and loading it in cars, have been erected, the importance of which will be stated hereafter...’ This wealthy and admirably managed Company own a thousand acres of coal land in the vicinity of Scranton upon which it is estimated there is over fifty million tons of excellent coal. / After this original coal breaker in this district went into operation in the fall of 1853, it turned out during the remainder of the year, 5,000 tons of prepared coal.” Hollister

The second breaker in the Northern Coal Field was the Von Storch Breaker, which was erected in 1857. About those two breakers (the one at the DL&W's Diamond Mines, and the Von Storch Breaker), we read the following in Chapter XX (pp. 160-164) of Hollister's unpublished manuscript (c. 1880), which is titled “THE INTRODUCTION OF COAL BREAKERS INTO THE LACKAWANNA COAL FIELDS WITH THEIR DESTRUCTIVE FEATURES. VON STORCH BREAKER.”

Here are pages 160-164 from that remarkable chapter:

“No one residing in the coal region can forget the time when no other kind of coal was seen or sold but lump coal. The miner or laborer immured with pick and drill in his lengthened chamber, broke up the large lumps in the mines simply to facilitate easier loading into mine cars. In this form anthracite was carried to market and broken only as it was used without waste. Until within a comparatively a short period, no prepared coal found its way into recognition and use. Each piece was fractured by hand with the same patient labor that wood, drawn from the forest in logs or tree tops, required strokes from the axeman to fit it for the fire place. One of the greatest conspirators of modern times against economy is that invention of the devil known as a Coal Breaker; an institution that inaugurated a system of waste and loss of anthracite beyond repair and almost beyond measure. When posterity contemplates the flattened hills and culm-burning valleys a century hence this enemy will be taunted as the robber of the Continent. / The credit or reproach of instituting one in this coal district, does not belong to this [D&H] Company. It was a disastrous day for all anthracite regions when competing coal men assented to waste a third part of the coal by breaking and screening it, for the sake of saving the remaining two-thirds in a prepared form. The eruptions of culm piles, heightened into pyramids or Black hills, all formed of the purest coal around every breaker from Carbondale to Nanticoke, exhibit the certainty and

rapidity with which our streams are being choked and our mountains depleted of their value by a process alike wasteful and exhausting. True, it offers it advantages to the indolent consumer but how fatal to the interior and exterior of our frail and unresisting hills and valleys! / The actual loss in coal while the iron teeth and tireless jaws of the breakers subdue lump into ordinary stove coal, has been estimated by Daddow at 20 to 25 per cent. This estimate is too small according to more competent judges. I. W. Chittenden, a gentleman whose unquestioned good judgment and official position in the Delaware and Hudson Canal Company, gives weight to his opinion, has investigated this matter most thoroughly. By the most careful and repeated computations, he found the actual loss of volume in anthracite while preparing it by the usual grinding or breaking process, to be precisely $29 \frac{5}{10}$ per cent, or about one-third of its real weight. This appalling amount is a total loss to coal territory, to all Companies engaged in its production and to the world at large. / The Delaware and Hudson Canal Company alone own four hundred millions tons of coal, over and above the fifty million tons already mined including wastage in culm. Before half of this is mined, provided the same destructive plan of preparing it as now is continued, the culm piles which already suffocate villages and smother the cities along the Lackawanna will close up the valley with a mountain of ground coal higher than the Moosic and obliterate this fair vale from the sight of coming generations. / Within the Schuylkill, Lehigh, Lykens, Wyoming and Lackawanna coal area sufficient culm has been swelled into hills to go far toward liquidation of the national debt by supplying twenty generations of come with fuel provided it could be utilized. The false economy of breaking up coal by machinery, in the Northern Coal Field, began under the auspices of the Delaware and Lackawanna and Western Railroad Company at the Diamond Mines in Scranton in 1852. / The first Annual report of this Railroad Company[D&H] made January 1854 [emphasis added] says, ‘that during the present year the steam power coal breaker at Diamond Mines (commenced in 1852) has been completed and put into operations. Additional screens and schutes and other apparatus for preparing the coal for use and loading it in cars, have been erected, the importance of which will be stated hereafter...’ This wealthy and admirably managed Company own a thousand acres of coal land in the vicinity of Scranton upon which it is estimated there is over fifty million tons of excellent coal. / After this original coal breaker in this district went into operation in the fall of 1853, it turned out during the remainder of the year, 5,000 tons of prepared coal. / No steam coal breaker rose from the mines of the Delaware and Hudson Canal Company until a later date. In 1855 the Von Storch lands lying in Providence, were leased by Messrs. Bowkley and Howard, of Pittston. They organized a Company in 1857 composed of Col. J. W. Johnson, Abell Bennett, B. F. Sawyer, John Howarth, C. Pierson, Ferdinand and G. and Justus Von Storch and others, sank the Van Storch Schaft by the aid of Captain John Martin, erected a coal breaker over it all with the view of sending coal North and West by the Delaware, Lackawanna & Western Railroad. / These Von Storch lands were desired by Maurice and William Wurts, while exploring the Valley for coal before they had chosen the timbered site of Carbondale for mining it. Could these gentlemen in 1812-15 have purchased this rich tract from its owner Henry O. L. Von Storch as they aimed to do, opened mines, sought Cobb’s instead of Rixe’s Gap for an outlet, tenanted the unploughed

acres by encouraging and developing a manufacturing town there would have been no Carbondale or Honesdale and the forests then standing upon their sites might yet have rung with the merry notes of wild turkeys and singing birds./ Traditional pride in the judgment of Maurice and William Wurts in reference to these lands, with a correct perception of their value by Thomas Dickson then Superintendent of the gravity railroad and coal department influenced the Delaware and Hudson Canal Company to purchase the Von Storch coal lease with all improvements pertaining to it. The breaker was removed from the shaft to the mouth of the slope on the Lackawanna half a mile from its original location soon afterwards and up until the Spring of 1874 contributed important tonnage to the Railroad and the Canal. In 1874 this breaker worn out in masticating nearly 2,000,000 tons of coal left its Himmelah mark between Providence and Green Ridge as its monument then dissolved from view only to make room for a new one of greater capacity and greedier proportions. “

The third breaker built in the Lackawanna and Wyoming Valleys, and the first D&H breaker, was the Racket Brook Breaker, which, we read in *Clark* (p. 216), was built in 1858-59:

“Up to 1858, all the coal taken out at Carbondale was upon platform cars, three boxes on each, holding respectively five hundred pounds, which were dumped by hand power, two men doing the work. The coal was then transported to Honesdale, where it was run over grate bars, which was the only means of assorting it. The first breaker erected to break the coal for market was the one above the city [Racket Brook], on the mountain, commencing work about 1858-9.”

The Racket Brook Breaker, we learn from *1880* (p. 447), was rebuilt in 1868.

In *Century of Progress*, we read the following about the Racket Brook Breaker:

“As late as the year now under review [1858] the company had not installed or used a coal breaker but continued to assort its anthracite by running it over grate bars at Honesdale, although as early as 1852 the Delaware, Lackawanna and Western Railroad Company began breaking down coal by machinery.”(*COP*, p. 159)

From February 1867 up to 1880, and perhaps after that, William P. E. Morss was the foreman at the Racket Brook breaker. That we know from the following statement from *1880* (p. 452D):

"WILLIAM P. E. MORSS, foreman of breaker at Racket Brook, since February, 1867, was born in Greene county, N. Y., in 1827, and came to Carbondale in 1832. He married Margaretta E. Burnham, of Spencer, Columbia county, N. Y."

On March 2, 1866, a lad named Quinn, has his left leg cut completely off when he was run over by Gravity cars at the Racket Brook Breaker. In the *Carbondale Advance* of March 3, 1866, we read:

“We learn that a lad named Quinn had his left leg cut completely off by being run over by the cars at the Racket Brook Breaker, just above town yesterday.” (*Carbondale Advance*, March 3, 1866, p. 2)

On July 2, 1868, John Bell, who was born in Castle Kerrick, Cumberland, England, was killed almost instantaneously at Racket Brook Breaker when he was accidentally caught between the revolving screen and the plank floor. Here is the account of the accident from the *Carbondale Advance* of July 11, 1868:

“Sad and Fatal Accident. / A melancholy accident occurred at Racket Brook Breaker near town, on Thursday, July 2nd ult. resulting in the almost instantaneous death of Mr. John Bell, a highly respected citizen of this city. / Mr. Bell was employed at the Breaker and was accidently caught between the revolving screen and the plank floor adjacent, and was literally crushed, so as to survive but a few minutes. / He was an exemplary and devoted member of the M. E. Church in this city, having connected himself with it immediately after his arrival here, twenty-three years since. / He was born in Castle Kerrick, Cumberland, England, and was fifty-four years of age. . .” (*Carbondale Advance*, July 11, 1868, p. 3)

The Racket Brook Breaker operated for 243 ¼ days in 1881, producing a total of 174,538.13 tons of coal.

Coal from the Racket Brook Breaker was regarded, in 1883, as “the best coal that goes over the gravity,” thanks to W. P. E. Morss. In the *Carbondale Leader* of March 23, 1883, we read:

“Racket Brook breaker sends out the best coal that goes over the gravity. Wm. Morss knows how to keep it best.” (*Carbondale Leader*, March 23, 1883, p.3)

In late July 1883, William Morss, Jr. became the assistant of W. K. Allen at the Racket Brook weight office. Here is the announcement to that effect that was published in the *Carbondale Leader* of July 27, 1883:

“Wm. Morss jr is permanently situated as assistant to W. K. Allen, at Racket Brook weigh office.” (*Carbondale Leader*, July 27, 1883, p. 2)

On September 11, 1883, at the Racket Brook Breaker, a timber a foot square and twelve feet long fell a distance of eight feet and struck Warren Tappen on the foot, smashing it badly. Here is the account of the accident from the *Carbondale Leader* of September 14, 1883:

“Mr. Warren Tappen met with a painful accident at Racket Brook Breaker last Tuesday. A timber, a foot square and twelve feet long, fell a distance of eight feet striking Mr. Tappen on the foot smashing it badly. He was taken to his home in Carbondale, where he will be laid up for some time.” (*Carbondale Leader*, September 14, 1883, p. 3)

In early September 1883, John Haley, who worked formerly at Plane No. 4 on the Gravity Railroad, began working at Racket Brook Breaker under W. P. E. Morss. In the *Carbondale Leader* of September 14, 1883, we read:

“John Haley, formerly at No. 4, has accepted a position under W. P. E. Morss, at Racket Brook Breaker.” (*Carbondale Leader*, September 14, 1883, p. 3)

In mid-October 1883, Warren Tappen became the supervisor at Racket Brook Breaker. “The Breaker,” said the *Carbondale Leader* of October 20, 1883, “has [by that appointment] been very much improved.”:

“Racket Brook breaker has been very much improved under the supervision of Mr. Warren Tappen.” (*Carbondale Leader*, October 20, 1883, p. 2)

On January 8, 1884, the Racket Brook Breaker did not operate, on account of the scarcity of water there. In the *Carbondale Leader* of January 11, 1884, we read:

“On account of the scarcity of water Racket Brook breaker was idle last Tuesday afternoon.” (*Carbondale Leader*, January 11, 1884, p. 2)

In a splendid demonstration of compassion, and very much characteristic of the humanitarian management skills of the majority of the managers of the D&H, Kirt Bice was promoted, in late April 1884, from his position at the Racket Brook Breaker to a position at the foot of Plane No. 4, where he would earn eighty cents more per day than at the breaker. As the managers in question, William McMullen and Wallace Dimmock, surely knew, the increase in Kirt’s wages would greatly assist his widowed mother to support the children left to her care following the death of her husband, Malon Pruner, the foreman at Plane No. 7, who was killed in an accident on the Gravity Railroad in late March/early April 1884. About this humanitarian act/promotion, we read the following the April 25, 1884 issue of the *Carbondale Leader*:

“Kirt Bice, son of Mrs. Malon Pruner, has been promoted from Racket Brook Breaker to the foot of No. 4, where he earns eighty cents more per day. This act on the part of Mr. Wm. McMullen and Wallace Dimock is commendable, as the increase in Kirt’s wages will greatly assist his widowed mother to support the children left to her care.” (*Carbondale Leader*, April 25, 1884, p. 2)

In mid-April 1885, “the Polanders” who were employed at Racket Brook Breaker as slate pickers were discharged as fast as boys could be found to put in their places. In the *Carbondale Leader* of April 14, 1885, we read:

“The Polanders, who have been employed as slate pickers at Racket Brook breaker, are being discharged as fast as boys can be found to put in their places.” (*Carbondale Leader*, April 14, 1885, p. 1)

On January 5, 1886, John Love, age 14, on his way to work, was run over by a trip of light cars at Racket Brook Breaker that were being switched from the breaker onto the main road. Here is the report on the accident from the *Carbondale Leader* of January 8, 1886:

“John, the fourteen year old son of William Love, met with a sad accident at Racket Brook breaker, Tuesday morning. He was going in to his work and in some way got in the way of a trip of light cars that were being switched from the breaker on to the main road. The man in charge of the trip saw the lad’s peril and did all in his power to avert the accident, but without avail. The cars knocked the boy down, and one of his ankles was badly crushed. He was removed to his home, and medical aid was summoned. It is thought that amputation will not be necessary.” (*Carbondale Leader*, January 8, 1886, p. 4)

From the *Reports of the Inspectors of Mines*, 1887 (p. 19), we learn that on November 9, 1887, Daniel Campbell, age 14, employed at Racket Brook colliery in Carbondale Township, was in a non-fatal accident (injured slightly; run over by cars on plane outside).

On February 1, 1887, James Clift, a footman at Plane No. 4 on the Gravity Railroad, attempted to jump on a trip of coal cars going up the plane leading to the breaker. He slipped and fell under the cars, with both legs across the rails. Both legs were mangled horribly. It was expected by Doctors Bailey and Wheeler that both legs could be saved. Here is the report on the accident from *The Journal* of February 3, 1887:

"A Sad Accident. / A very distressing accident occurred at the Racket Brook Breaker at about half past one o'clock on Tuesday afternoon. James Clift, who was employed as footman,

attempted to jump on a trip of coal cars going up the plane leading to the breaker, when he slipped and fell under the cars with both legs across the rails. He was unable to extricate himself and the wheels passed over both legs, mangling them horribly. The right leg was broken in two places between the knee and foot and the left leg was badly fractured near the ankle. Drs. Bailey and Wheeler are attending the case, and entertain strong hopes of saving both legs. / Young Clift is about 16 years of age, and is a son of Thomas Clift, who lives on Rock avenue." (*The Journal*, February 3, 1887, p. 3)

In April 1887, the culm pile at the Racket Brook Breaker was one of the largest in the anthracite region. At that time, the D&H decided to screen the entire pile to extract the buckwheat and pea coal that the thirty year old culm pile contained. Accordingly, on April 6, 1887, work was begun on the construction of a branch track around the culm pile to make possible the screening process. Not only was this a profitable venture for the D&H, at the same time it gave employment to a large force of men for a considerable period of time. The following article about this project was published in the *Carbondale Leader* of April 7, 1887:

“SCREENING A CULM PILE. / The New Way of ‘Mining Coal’ at Racket Brook Colliery. / For thirty years [since 1856-1857:] the enormous pile of culm at Racket Brook breaker has been accumulating. It is one of the largest, if not the largest, pile in the coal region, and is almost a mountain. It contains, according to men competent to judge, many thousands of tons of coal, which were dumped there at a time when there was no machinery with which to screen buckwheat and pea coal, and it is now the intention of the D. & H C. Co. to screen this vast heap and extract the coal which will be a profitable thing for the company if a large amount of it has not been destroyed by internal fires, from which nearly every culm deposit suffers. / Yesterday work was begun on the construction of a branch track around the deposit and the screening will be commenced as soon as this is done. / Besides being a profitable thing for the D. & H. C. Co., this work will give employment to a large force of men for some time.” (*Carbondale Leader*, April 7, 1887, p. 4)

In the article given above about the screening of the culm pile at the Racket Brook Breaker, we find the following statement about culm piles:

“... it is now the intention of the D. & H C. Co. to screen this vast heap and extract the coal which will be a profitable thing for the company if a large amount of it [the coal in the culm pile] has not been destroyed by internal fires, from which nearly every culm deposit suffers [emphasis added].”

Fact learned: Spontaneous combustion regularly took place in culm piles. As the residents of the anthracite region of northeastern Pennsylvania during the heyday (and after) of anthracite mining

knew well, burning culm piles were a common visual—and olfactory—feature of the landscape/environment. It is very interesting to know that the fires in many, possibly all, of those burning culm piles were the result of spontaneous combustion deep in those culm piles.

Less than a week after the screening of the culm pile at the Racket Brook Breaker had begun, W. P. E. Morss, under whose direction the screening was taking place, said that “. . . even in the poorest section of the heap, upon which the work was begun, 33 per cent of it has been found to be good coal. He would not be surprised, he said, if at least 50 per cent was good in some parts.”

Even if only one third of the “millions upon millions” of tons of culm/coal in the culm pile is coal (pea, buckwheat, bird’s eye), the venture was expected to be very profitable to the D&H. The primary cost associated with the screening process as the screening began was the cost of the loading, which was done by hand. It was expected that a steam shovel would be brought in to facilitate the loading. Here is the complete article about this screening of the culm pile at the Racket Brook Breaker that was published in *Carbondale Leader* of April 12, 1887:

“THE SCREENING PROCESS. / How the Work at Racket Brook Breaker Progresses. / Until the screening of the immense pile of culm—or rather what has been for years thrown away as culm—at Racket Brook breaker was begun last week, there were perhaps few who ever thought of the vast amount of good coal contained in the matter which has formerly been wheeled from the breakers and called waste. / This novel way of ‘mining coal’ is under the direction of Wm. P. E. Morse who said yesterday morning that even in the poorest section of the heap, upon which the work was begun, 33 per cent of it has been found to be good coal. He would not be surprised, he said, if at least 50 per cent was good in some parts. During most of the years during which this amount has been piling up nobody thought of using anything smaller than chestnut coal; now pea coal is in demand, and ‘buckwheat’ and ‘birds eye’ are marketable. There are ‘millions upon millions’ of tons, as Mr. Morse expressed it, in the Racket Brook culm pile, and if even one third of this is coal, the profit to the company in screening will be readily seen. / At present the loading is all done by hand and costs the company more for this than anything else. It is probable that at an early day a steam shovel will be put in to do this work. Already facilities in the breaker are being increased, and the work keeps the place humming on full time.” (*Carbondale Leader*, April 12, 1887, p. 4)

The thirteen-year old son of Harry Campbell, who was a slate picker at the Racket Brook Breaker, fell, on November 9, 1887, from a flat-bottomed car at the foot of Plane No. 4 and struck his head on the small car which carries the rope back from the breaker into the foot. Here is the report on the accident that was published in *The Journal* on November 10, 1887:

“About 11 o’clock on Wednesday morning, Johnny, the 13 year old son of Harry Campbell, was standing on a flat-bottomed car at the foot of the plane at Racket Brook breaker. The car was

hooked on to be drawn up the plane, and the consequent jerk threw young Campbell off the car. He fell and struck on the small car which carries the rope back from the breaker into the foot. His collar bone was broken, and he was badly bruised about the head and shoulders. He was taken in the ambulance to his home on Eighth street, and Drs. Wheeler and Day called. The injured lad was employed as a slate picker in the breaker.” (*The Journal*, November 10, 1887, p. 3)

In late December 1887, the Racket Brook Breaker was working ten hours a day, and in order to do so it was necessary to light lamps there in the evening. Several personnel changes took place at that time, as we learn from the following article that was published in the *Carbondale Leader* of December 29, 1887:

“The hands at Racket Brook breaker have been working ten hours per day for some time past, and in order to do this it has been necessary to light lamps in the evening. A number of changes have recently occurred at the breaker. The engineer, Martin Finlan, has resigned, and Wm. Reardon now fills his place, while Wm. Bergan has been advanced to the post of fireman in place of Reardon.” (*Carbondale Leader*, December 29, 1887, p. 4)

On July 20, 1892, John Kelley, age about 17, on his way to work at the Racket Brook Breaker, got his foot caught between the bumpers on two loaded Gravity coal cars at the head of Plane No. 1, and fell between the cars. His body was crushed terribly. Here are the details on this tragic accident as reported in the *Carbondale Leader* of July 20, 1892:

“MET A SHOCKING DEATH. / John Kelley Fell Under Gravity Cars and His Life Was Crushed Out Almost Instantly. / John Kelley, a boy about seventeen years of age, son of Mr. and Mrs. Michael Kelley, of South Main Street, met a horrible death early this morning at the head of No. 1 plane of the gravity road. For about a year the boy had been employed at Racket Brook colliery and he was on his way to work when he met his death. As had been his custom he went to the foot of No. 1 plane shortly before seven o’clock and boarded a ‘trip’ of gravity cars to ride up the mountain. On the car ahead was James P. Loftus, foreman of the works. / When a trip of cars reaches the [top of a] plane a brake is set on a forward car by men employed to take charge of them after the detachment of the sling, and this causes the cars to bump together suddenly. From the appearance of the boy’s shoe after his body was recovered it is thought that when this happened Kelley’s foot was caught between the bumpers and he was so weakened by the pain that he lost his hold and fell between. This idea is confirmed by the statement of Mr. Loftus, who says he happened to look back when the cars had just gone over the head, and saw the boy turn pale, faint and fall to the rails. He uttered only a faint cry as he went down. / Mr. Loftus dismounted and went back as fast as he could, and saw a sight that he never wishes to witness again. The body’s body had been caught by the wheels and was being dragged along and crushed with every foot of the ground covered. The train to which this trip had been attached was

one of about thirty loaded cars and it was impossible to stop it before the body was dragged over fifty feet. / When the cars had been stopped and the body was taken out it was found that it had been crushed terribly. The young man's clothes had prevented his flesh from being torn very badly, but his body had been ground so horribly that it was much distorted and it was evident that he died almost instantly. The Delaware & Hudson company's ambulance was summoned while a messenger was dispatched to bear the news to Kelley's parents. The father has been for many years an employe in the Gravity machine shop. / The victim of this unfortunate and terrible accident was a very manly body in every way. Although young he was large of physique, dignified, reticent and always courteous and generous to his associates. For several years he was a carrier for *The Leader* and the attaches of this paper can testify of his worthiness and the promise of a noble manhood that has been cut short in so untimely a manner." (*Carbondale Leader*, July 20, 1892, p. 4)

On Wednesday, October 26, 1892, 247 cars of coal, as it came from the mines, were run through the Racket Brook Breaker. Such an accomplishment was made possible, it was believed by many, because Foreman Loftus was now in charge at Racket Brook Breaker, where, that day, 1,086 tons of coal were cracked and screened in a single day, with less than three percent waste in the coal, making that day "the best day's work ever done at Racket Brook since it was built." In the *Carbondale Leader* of October 28, 1892, we read:

"ALONG THE GRAVITY. / News Notes from a Correspondent on the Moosics. / There have been wonderful improvements at Racket Brook breaker since Foreman Loftus took charge. When they can crack and screen ten hundred and eighty-six tons of coal, in one day, and not find a car with over three percent waste, it is the best day's work ever done at Racket Brook since it was built, which shows there must be something in the management. / There were 247 cars of coal, as it came from the mines, run through the breaker at Racket Brook Wednesday." (*Carbondale Leader*, October 28, 1892, p. 4)

On November 10, 1892, Michael Walsh, of Pike Street, Carbondale, died. For thirty years he worked at the Racket Brook Breaker. He was survived by his wife and eight children, four sons and four daughters. Here is the notice of his death that was published in the *Carbondale Leader* of November 11, 1892:

"Death of Michael Walsh. / Michael Walsh, a well known and highly esteemed resident of Pike street, died last night after an illness of just one week. Deceased came to this city more than forty years ago and for thirty years he has been constantly employed at Racket Brook breaker. He is survived by his wife and eight children four sons and four daughters. The funeral will take place Sunday afternoon at 3:30 o'clock." (*Carbondale Leader*, November 11, 1892, p. 4)

On Saturday, February 4, 1899, a mule named “Sanders” and his driver accidentally rolled down the culm bank at the Racket Brook Breaker. The following notice on this fall was published in the *Carbondale Leader* of February 6, 1899:

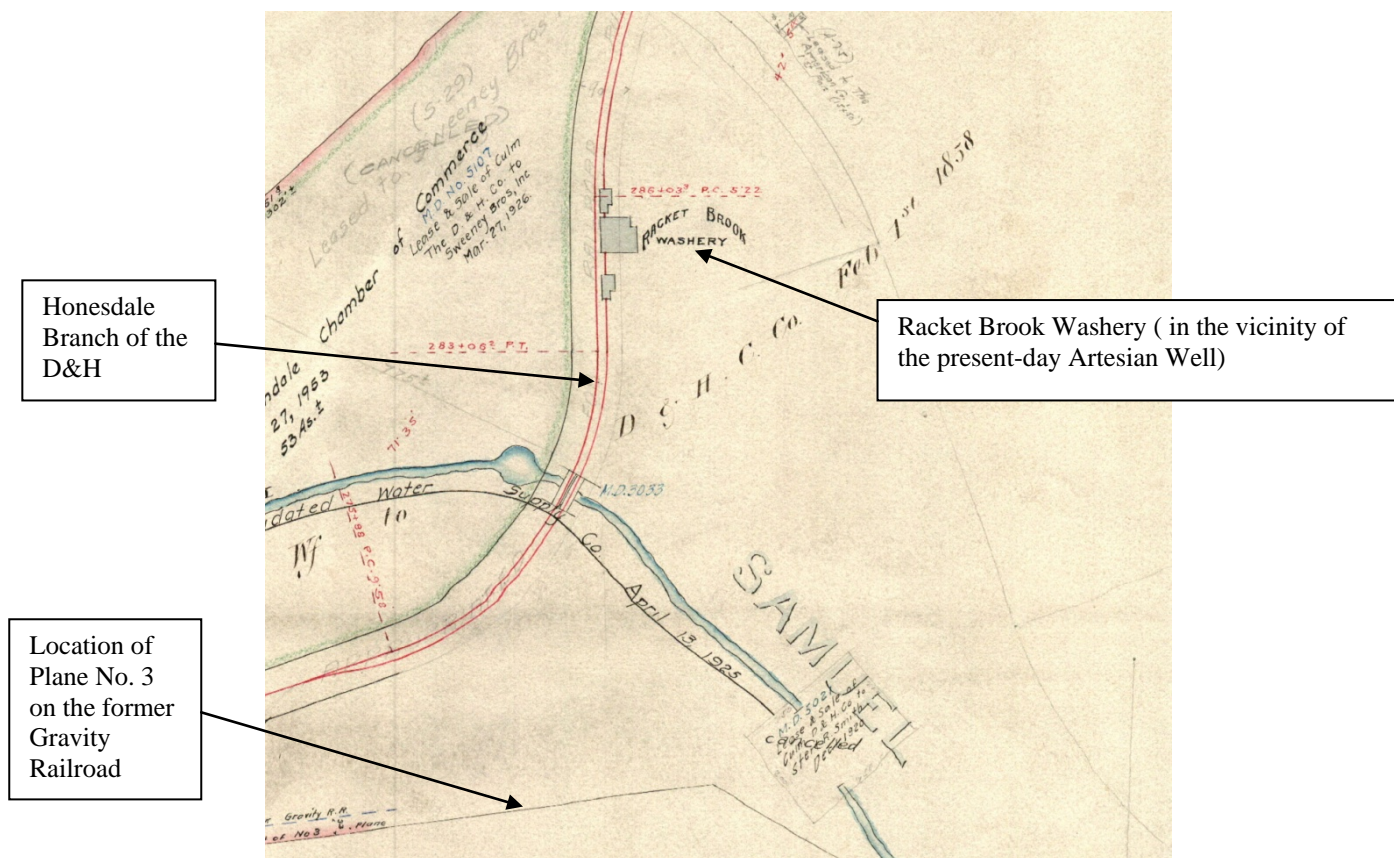
“DOWN THE CULM PILE. / A Man and Mule Roll from Top to Bottom. / The culm pile at Racket Brook breaker was a scene of excitement Saturday between the hours of 2 and 3 o’clock. A mule they call ‘Sanders’ with his driver had started on their usual round. They didn’t go far when the spirited animal became frightened and rolled down the bank. The driver held on until he too reached the bottom. Only for the kindly assistance of James Loftus he might be hanging on yet.” (*Carbondale Leader*, February 6, 1899, p. 5)

In 1928, John A. Hines, who was born in Pittston on May 13, 1879, was the superintendent at the Racket Brook coal mines. That fact is reported in Volume II of Thomas Murphy’s 1928 *History of Lackawanna County*, in the biographical portrait of John A. Hines (pp. 884-885), p. 884, wherein we read: **“John A. Hines** is well and favorably known in Carbondale, where he is superintendent of the Racketbrook Coal Mines. He was born at Pittston, Pa., May 13, 1879, and is the son of Roger A. and Julia (Kelly) Hines. . .”

Racket Brook Washery

In December 1898, the Racket Brook Washery was in the process of being constructed.

In the collection of the Carbondale Historical Society and the Carbondale D&H Transportation Museum is the original copy of a map book titled *Delaware & Hudson Company's / Railroad / Honesdale Branch / Carbondale to Honesdale*, March 1901. In that map book, the exact location of the Racket Brook Washery is shown. Here is a detail from one of the maps in that volume:



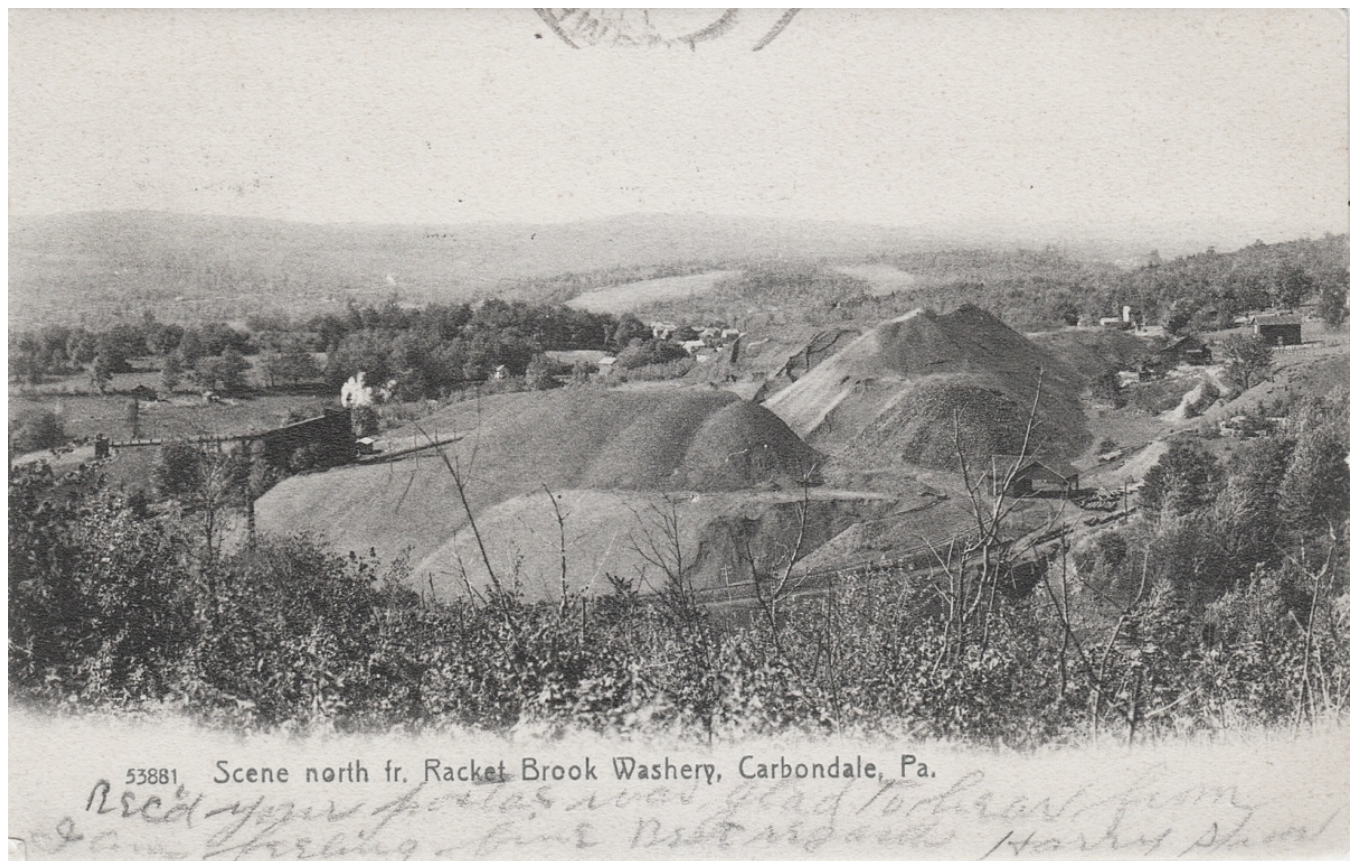
Detail from map volume titled: *Delaware & Hudson Company's / Railroad / Honesdale Branch / Carbondale to Honesdale*, March 1901.

In August/September 1899, the D&H drilled two artesian wells to supply water for the new Racket Brook Washery, which had a capacity of processing 5,000 tons of coal per day. To do so, three hundred gallons of water per minutes were necessary. One of the new wells was four hundred feet deep, with a bore hole eight inches in diameter. The flow of water from both wells was 400 gallons a minute. Here is the article on the two new D&H artesian wells that was published in September 1, 1899 issue of the *Carbondale Evening Leader*:

“BOTH WELLS ARE FLOWING. / Splendid Success Had by the Delaware & Hudson in Sinking Artesian Wells for the Washery. / The Delaware & Hudson company have had a force of men drilling two wells upon its property at Racket Brook for several weeks and their efforts have been crowned with a glorious success. / Both wells are down quite a depth; one four hundred feet and bore hole is eight inches in diameter. The flow of water is large. It is stated that both wells will flow 400 gallons a minute. A large supply of water is needed for use in washing the immense quantity of culm that is put through the new washery at that point. This washery is said to be the best one in this section, containing the most modern machinery and having a

capacity of 5,000 tons a day. In cleaning this coal, it requires three hundred gallons of water a minute. It is believed that these two wells would furnish a supply sufficient for one-third of the population of this city. / The quality of the water is unsurpassed, being clear and cold and it is believed an analysis would show it to be free from all deleterious substances. Suffice it to say, the quality is far superior to that furnished this city now. With such an immense supply of water so close at hand it would seem that some arrangements could be made to drill enough of these wells to supply the demand for manufacturing and domestic purposes. That an unlimited supply of water is to be had by simply making the effort, there is no question. And there is no doubt on account of the attitude of the Consolidated Water Supply company in charging exorbitant rates, that during the coming year, numerous wells will be drilled for private concerns if not for public use.” (*Carbondale Evening Leader*, September 1, 1899, p.6)

Post card in the collection of the Carbondale Historical Society titled *Scene north fr. Racket Brook Washery, Carbondale, Pa.*



Scene north fr. Racket Brook Washery, Carbondale, Pa.

In D&H Time Table No. 33 ("For the Government of Employees Only"), which became effective September 25, 1938 at 12:01 A.M., we find the following information on the Racket Brook Mine Branch:

Racket Brook Mine Branch

The Racket Brook Mine Branch begins at Lookout Junction and ends at a point 1000 feet south of Garfield Avenue.

Movements over this Mine Branch will be directed orally by the Train Dispatcher.

The Highway Crossing Signals at Tenth Avenue, Wayne Street, Lincoln Avenue, and Garfield Avenue, on this Branch have been removed.

Trains or engines operating over these crossings will do so under flag protection against vehicular or pedestrian traffic.

Hand throw derails are located on this Mine Branch 350 feet north of Racket Brook Breaker, and 750 feet south of Garfield Avenue.

(The Delaware and Hudson Railroad Corporation / Pennsylvania Division / Time Table No. 33 / Effective Sunday, Sept. 25th, 1938 at 12:01 A.M. . . For the Government of Employees Only, p. 18)

1899

Raymond Breaker

The Raymond Breaker was located at the Ridge in Archbald.

In July 1899, a new vein of coal was found on the Hackley tract in Archbald. The vein of coal is a particularly good one as it consists of six feet of clear coal. When the coal is mined, it will be taken to the Raymond breaker at the Ridge and then prepared for market. About this new vein of coal, we read the following in the *Carbondale Leader* of July 31, 1899:

"NEW VEIN OF COAL / Will Be Mined by the Forest Mining Company. / Miners in the vicinity of Archbald will be pleased to hear that the Forest Mining company is about to begin mining from a six feet vein of coal, discovered but a few days ago. In view of the fact that the Delaware and Hudson mines are not working on account of the burning of the White Oak

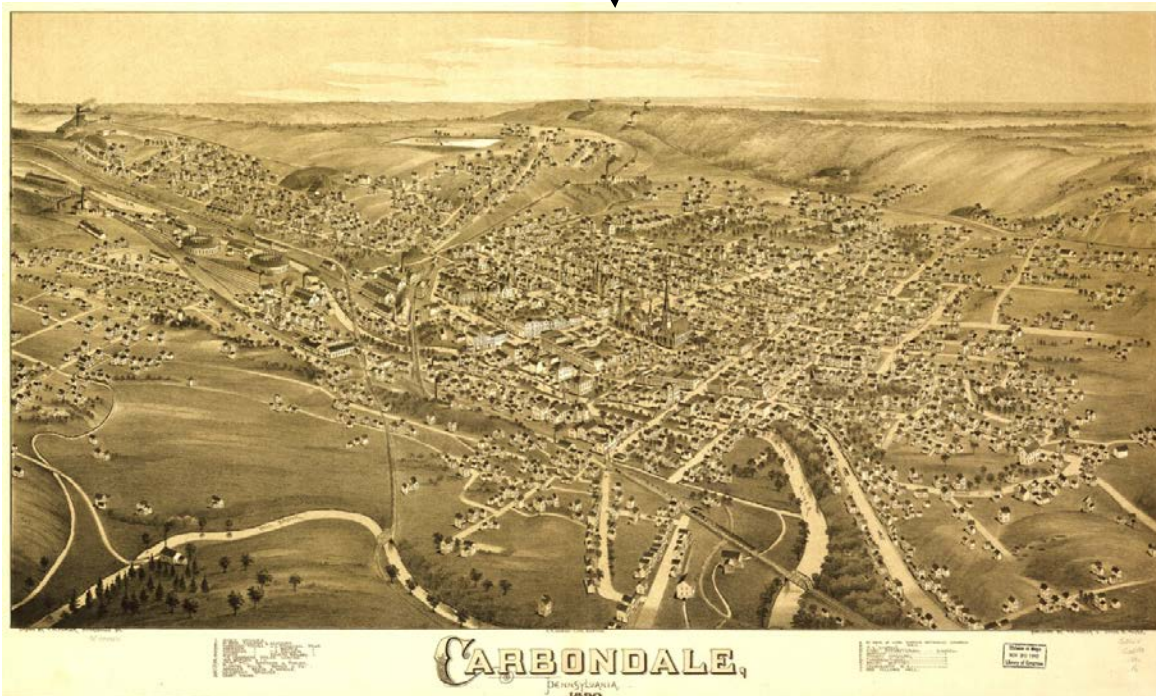
breaker, this is particularly good news. / The opening will be made on the Hackley tract, a little beyond the culm pile on the west side of town. Several attempts were made to strike the vein but this was not accomplished until last week. The vein is a particularly good one as it consists of six feet of clear coal, perhaps the best to be found in the borough. The vein is supposed to exist in two hundred acres of the tract. / When the drift from which the coal will be taken is in operation the coal will be taken to Raymond breaker at the Ridge and then prepared for market. The working of the drift will give employment to many men and boys.” (*Carbondale Leader*, July 31, 1899, p. 2)

1900

Rease & Mosier’s Colliery

The Rease & Mosier Colliery was in Carbondale.

Rease & Mosier’s Colliery in Carbondale, we learn from the index at the bottom of this map, is indicated on the map shown below as “12”. To date, we have not been able to locate that colliery on this map.



Carbondale, Pennsylvania, 1890. Drawn by T. M. Fowler. A. E. Downs, lithograph. Bird’s eye view of the town of Carbondale, with numbered identification legend which includes the following: 11. Breaker, Rease and Mosier / 12. Colebrook Breaker

On the morning of November 4, 1890, John Hopkins, age about 20, accidentally put his right foot into the teeth of the Rease & Mosier breaker and his leg was drawn in and crushed half way up to the knee. At the time of the accident, he had worked at the breaker about a week. Here is the account of the accident that was published in the *Carbondale Leader* of November 4, 1890:

“A HORRIBLE ACCIDENT. / John Hopkins Drawn Into the Crushers at a Coal Breaker.
/ John Hopkins, a young man employed at Rease & Mosier’s colliery, met with a painful accident this morning that caused the loss of the lower part of one of his legs. Shortly before noon he was standing in the breaker talking to a friend and when he turned to walk away he stepped over the planking and put his right foot into the teeth of the coal breaker and his leg was drawn in and crushed half way up to the knee. Foreman Osborn who saw the accident gave the signal to the engineer and the machinery was stopped, but the belt proved to be slackened when Hopkins’ foot entered the rollers and was caught by the teeth. It was thrown off and the wheels ceased to move. / Had the belt been taut it is likely that Hopkins’ whole body would have been drawn into the rollers and crushed into a shapeless mass by the large iron teeth, before the eyes of the workmen in the breaker. With his leg held as in a vise and the bones and ligaments crushed Hopkins had to lie and watch the men cut away the iron which caused him intense suffering, but he did not lose consciousness and waited patiently for the operation which took nearly half an hour’s time. The leg was tied above the knee by Foreman Osborne to prevent a hemorrhage of blood, and when he was freed Hopkins was taken to his home, 156 Belmont Street, where his crushed member was amputated below the knee by Drs. Bailey and Wheeler. / The young man is about 20 years of age and had worked at the breaker but a week. He is weak from the amputation and the shock to his nervous system was great, but it is thought he will recover. / The accident and cutting of the iron has stopped the work at the colliery until the crushers can be repaired.” (*Carbondale Leader*, November 4, 1890, p. 4)

1901

Richmond Breakers

Richmond Breaker No. 3 was located in Providence, Blakely Township (built in 1860, burned in 1883), built by Richmond & Co. (W. H. Richmond and C. P. Wurtz): In 1863 the firm was merged into the Elk Hill Coal Co., with C. P. Wurts as president and W. H. Richmond as treasurer and manager. Richmond No. 3 was rebuilt in 1885 in the Second Ward of Scranton (now part of Dickson City), and sold in 1888 (to later become the Storrs Colliery which was operated by the Glen Alden Coal Co. until it closed in 1952).

In 1860, D&H Gravity Railroad coal cars, Gravity gauge, went directly to the Von Storch and Richmond breakers in Providence (see *Valley Road summary*). The Richmond Breaker in question was Richmond No. 3.

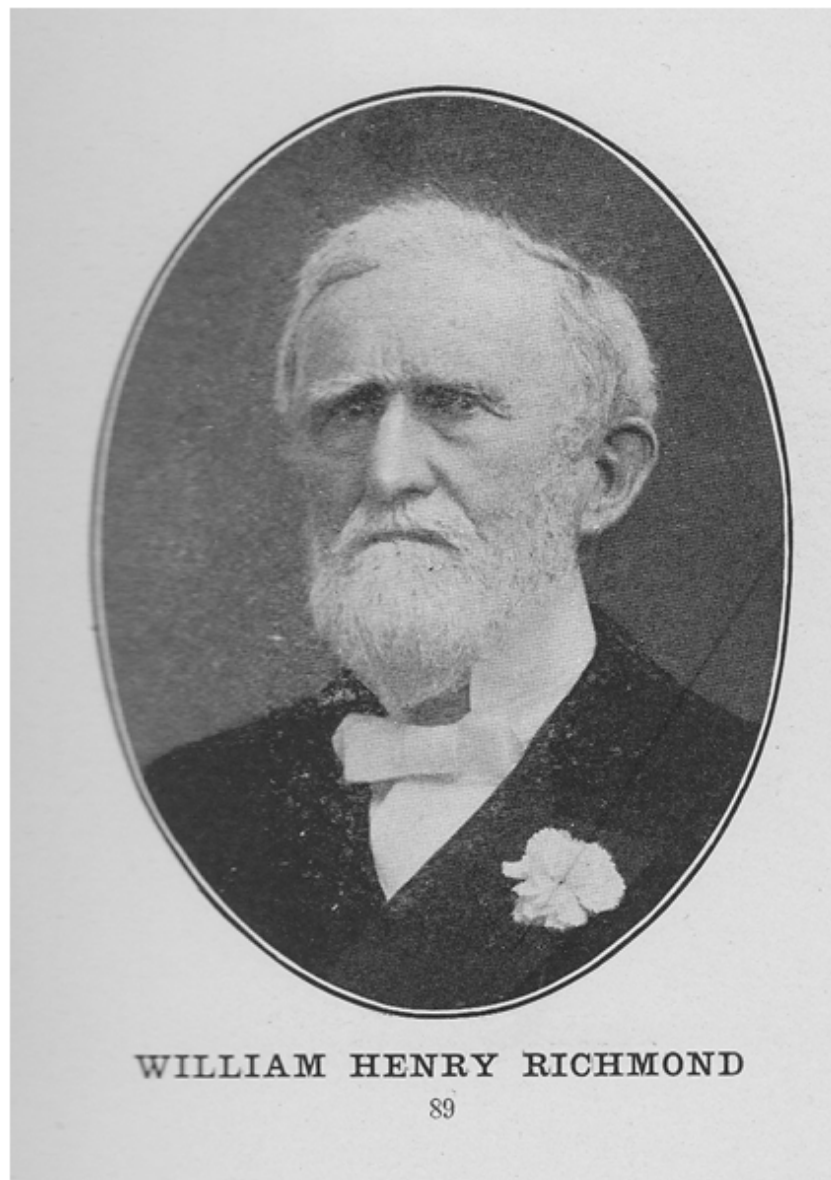
Richmond Breaker No. 4 was located in Richmondale. It was built in 1893.

Many additional details on those two Richmond breakers will be given in the pages that follow.

Richmond the Man

Before we take a close look at Richmond Breakers Nos. 3 and 4, we will focus on William Henry Richmond the man.

Here is the photograph of William Henry Richmond from page 23 of Stoddard's *Prominent Men* (p. 23):



Here is the biographical sketch of W. H. Richmond that is given in *Stoddard* (p. vi):

"WILLIAM HENRY RICHMOND / Born Marlborough, Hartford Co., Conn., 1821. Educated Private Schools. Married Lois Roxanna Morss, 1849. Merchant. Coal Operator. Retired. In business in Penna. since 1842. Treas. Lack'a Bible Society. Mem. Am. Inst. Mining Engrs., Am. Jersey Cattle Club, U. S. Geographical Society."

In 1880 (p. 467), we find the following account of the Elk Hill Coal and Iron Company, whose colliery was opened by W. H. Richmond & Co. in 1859, with the breaker there being erected in 1860:

"THE ELK HILL COAL AND IRON COMPANY. / This company's colliery [in Dickson City borough] was opened by W. H. Richmond & Co., in 1859; the breaker, erected in 1860, was the first on the gravity road between Carbondale and Scranton. It was operated by Richmond & Co. until 1863, when W. H. Richmond, Charles P. Wirtz, George L. Morss, Alfred Wirtz and G. L. Dickson organized the Elk Hill Coal and Iron Company, and succeeded to the ownership of the mine. The lands worked are the property of the Central Coal Company, the principal owners of which are Colonel J. H. Johnson and Abel Bennett, jr., who opened the first colliery at the Notch in 1853 and sold to the Pennsylvania Coal Company the lands that formed the nucleus of its present immense business. The vein is worked from drifts extending in one direction a mile and a half from the opening. The capacity of the breaker is 300 tons daily; average production, about 250 tons. The number of tenement houses is sixty; total number of men and boys employed, 225. One forty horse power engine is used at the breaker. / The cloven foot of Molly Maguireism developed itself in the attempted assassination of Superintendent L. E. Judd, of Richmond colliery, in 1872, and in the inauguration of strikes, the only effect of which was the injury of the participants. The efforts of Treasurer Richmond of the Elk Hill Company to prevent the unlicensed sale of liquor in the vicinity of the works have had a beneficial effect on all concerned. / The Dickson City File Works is owned by the Elk Hill Coal and Iron Company, and makes the 'top top hand cut steel files.' It employs ten hands, under Foreman Thomas Sheldon, an old Sheffield file cutter, who claims to be able to equal the best work of English factories. / Besides the above named establishments, the company owns a large brick yard and a general store."

Additional information of the Elk Hill Coal & Iron Company is presented in the biographical portrait of William H. Richmond that is given in *Portrait and Biographical Record*, pp. 245-46. Therein, we read:

". . . The Elk Hill Coal & Iron Company, of which Mr. Richmond is president and treasurer, was incorporated in 1863 and has since become one of the most important industries of the kind in

Lackawanna County, operating two collieries, with a capacity for shipment of four to five hundred thousand tons per annum. Richmond Colliery No. 3 is situated in Dickson City, near Scranton, and turns out superior anthracite coal of every size. Richmond Colliery No. 4, about five miles above Carbondale, was built in 1893, when a shaft was sunk to two veins of coal at a depth of two hundred and two hundred and twenty feet below the surface, over which was erected a steel tower, fifty-two feet square at the base, and one hundred and eighty-seven feet in height. At a height of one hundred and forty-nine feet, as the coal is raised from the mine, it is discharged from the mine car and gravitates down a steel chute, two hundred and sixteen feet, to the breaker, which is a hundred feet high, and then sixty feet to the main crushing rolls. There is a distance of two hundred feet between the shaft and breaker, in order to comply with the mine law of the state for the safety of workmen. The culm and wastes of the colliery are taken away by a pressure blower and through an iron pipe ten inches in diameter. Shipments are made over the Richmondale branch of the New York, Ontario & Western road [this branch connected with the main line of the O&W at Northwest Junction] to the points of delivery. / . . . In May, 1842, he [W. H. Richmond] became a clerk in the store of R. H. More, of Honesdale, Pa., where he remained for three years. In 1845 he began the mercantile business at Carbondale, PA. under the firm name of Richmond & Robinson, becoming the sole owner in 1853, and for ten years he also manufactured sash, doors, blinds, coal cars, etc. / In January, 1860, Mr. Richmond commenced mining anthracite coal near Scranton under the firm name of Richmond & Co., having for partner Charles P. Wurts, late general superintendent of the Delaware & Hudson Canal Company. In 1863 the business was transferred to the Elk Hill Coal & Iron Company, with Mr. Wurts president, Mr. Richmond treasurer and manager. Connected with the business there are two stores. Mr. Richmond has bought goods continuously of the firm of Stone & Starr of New York and successors since 1845, and of the late firm of E. S. Jaffrey & Co., from 1850 until they went out of business in 1865. . ."

W. H. Richmond married Lois Roxanna Morss in 1849. Given below are two newspaper articles about their golden wedding anniversary celebration that were published in the *Carbondale Leader* on June 5 and 6, 1899. These two articles contain many interesting facts about the life and extraordinary career of W. H. Richmond:

“W. H. RICHMOND. / Golden Wedding Anniversary Celebrated Today—His Career a Remarkable One—Carbondale Guests. / A number of Carbondalians are today attending the golden wedding anniversary of Mr. and Mrs. William H. Richmond of Richmond hill, Scranton. Mrs. Richmond was Lois R. Morss before marriage. William H. Richmond was born in Marlborough, Hartford county, Conn., October 22, 1821. His father, William Wadsworth Richmond, was a blacksmith and foundryman. At the age of thirteen William left school and began his career in the world. For three years he was a clerk in a grocery store at Middle Haddam, Conn; but after the panic of '37 went back to the farm. In 1842 he went to Honesdale and became a clerk in the store of R. H. More. In 1845 he opened a mercantile store in this city

under the firm name of Richmond & Robinson. In 1849 he married, and in 1853 he became sole proprietor of the store. In 1860 he became a partner of Charles P. Wurts late general superintendent of the Delaware & Hudson, and began to mine coal at Dickson City. It was there he struck what brought him his wealth. In 1868 the firm was organized as the Elk Hill Coal company and a few years later Mr. Richmond owned a controlling interest. This company operated two of the richest collieries in the anthracite coal fields. Colliery No. 3 is in Dickson City, near the palatial home of Mr. and Mrs. Dickson. Colliery No. 4 is five miles above [north] of this city [Carbondale]. / Mr. Richmond was for many years a Republican, but he is now a Prohibitionist. Three daughters, graduates of Vassar—brighten his home. They are Mary Roxana, now Mrs. F. K. Tracy, Emeline K., and Clara M., all of whom will take an active part in the golden wedding celebration this afternoon and evening.” (*Carbondale Leader*, June 5, 1899, p. 5)

On the following day, a wrap-up article on the celebration was published in the *Carbondale Leader*, June 6, 1899, p. 2:

"50 YEARS OF WEDDED LIFE. Golden Wedding Celebration of Mr. and Mrs. W. H. Richmond Yesterday—Carbondalians Present. Rev. Dr. Y. C. Smith, Mr. and Mrs. Pierce Butler, Mr. and Mrs. W. L. Yarrington, Mr. and Mrs. D. Scurry, Mr. and Mrs. W. R. Morss, Mr. and Mrs. C. O. Mellen, Mrs. A. P. Trautwein, Mrs. J. E. Burr, Mrs. C. T. Meaker, Miss Lucy Joslin and P. S. Joslin were among those from this city who attended yesterday the celebration of the golden wedding anniversary of Mr. and Mrs. William H. Richmond at their elegant residence, Richmond Hill, Scranton. Everything that the devotion of their children and grandchildren and the affectionate remembrances of countless friends could do to make the occasion most joyful was not neglected. Many exquisite gifts in gold and silver and jewels were received and the rooms literally bloomed with roses sent as fond tokens to the bride and groom in whose lives had been realized most of the blessings the world calls good. Many telegrams and letters from distinguished out-of-town friends were received. / The house, which is one of the show places of this region, was lavishly decorated in every available space. Bouquets of fifty golden roses were at every point. In the drawing room the host and hostess received congratulations. At their side stood their granddaughter, Miss Lois Tracey, robed in her grandmother's wedding dress, a blue silk, richly brocaded, suiting well the slight, young figure. / In this gown, fifty years ago, Lois Morss was married to William H. Richmond in Red Falls, New York. Their children, Mr. and Mrs. F. K. Tracey, and Emeline and Clara Richmond, and several grandchildren were present to assist in the celebration of yesterday's event. / Refreshments were served both in the spacious dining room and in the large banquet hall on the third floor. Mrs. Huntington catered. Bauer's orchestra, stationed in an alcove in the second hall furnished music. / In the afternoon the ladies about the room were Mrs. James Ruthven, Mrs. G. L. Dickson, Mrs. A. H. Lee, Miss Harvey, of Wilkes-Barre; Mrs. George Catlin, Miss Fuller, of Elmhurst; Miss A. L. Morss, Carbondale; Mrs. E. P. Kingsbury, Mrs. B. F. LaRue, Miss M. E. Morss. The young ladies who served frappe were Miss Anna Matthews, Miss Grace Kingsbury,

Miss Caro Dickson, Miss Emma Fuller, Miss Emily Mayer, Miss Louise Matthews, Miss Eloise Gilmore. / In the evening those who assisted in entertaining were Mrs. A. D. Blackington, Mrs. C. S. Weston, Mrs. C. C. Rose, Miss Barker, Mrs. Townsend Poore, Mrs. Isaac Post, Mrs. Lee, Mrs. La Rue, Miss Anna Matthews, Mrs. B. E. Watson, Miss Flora Matthews."

In 1909, Mr. and Mrs. W. H. Richmond celebrated their sixtieth wedding anniversary. That we know from a newspaper article, dated June 7, 1909, that is preserved in one of the Gritman scrapbooks in the holdings of the Carbondale Historical Society.

The title/headline on that article on the sixtieth anniversary of the wedding of Mr. and Mrs. W. H. Richmond is as follows:

"60TH WEDDING ANNIVERSARY OF FORMER CARBONDALE COUPLE / Mr. and Mrs. W. H. Richmond Received a Host of Friends at Their Home in Scranton Saturday at an Unusual Event. Friends by the hundreds gathered Saturday to celebrate at Richmond Hill, Scranton, the sixtieth wedding anniversary of Mr. and Mrs. William H. Richmond."

That article contains a great deal of interesting data on the professional career of W. H. Richmond. Therein, we read:

" . . , Associated with Charles P. Wurts, general superintendent of the Delaware & Hudson Canal company, Mr. Richmond erected one of the first coal breakers on the road [Richmond No. 3], which was the beginning of the breaking of coal into different sizes, the practice prior to that being to send the coal to market as it was mined [emphasis added]. / In other lines Mr. Richmond was a pioneer in development. He was the projector of the Crystal Lake Water company, now controlled by the Scranton Gas & Water company under the corporate title of the Consolidated Water company. It was Mr. Richmond who gave the name to this company, which laid the foundation for the present fine water system of Carbondale and the upper valley. The Carbondale Gas company was another movement in which Mr. Richmond was active and for a number of years he was manager of the company. / It was Mr. Richmond, too, who was the first successful merchant to establish trade in the section of Carbondale now known as 'up town,' his store of those days being that now conducted by W.G. Scurry. As a member of the firm of Richmond & Robinson, which added a factory to its business of general merchandise, he was the first to introduce wood-working machinery in the Lackawanna and Wyoming valleys. These are a few of the things suggested by the anniversary of his marriage that recall what a pioneer was Mr. Richmond in the wonderful business and industrial development of the Lackawanna valley and what wonderful changes have been wrought during the three-score years of his married life. / **In Coal Business** / It was nearly a half century ago, in January, 1860, that this sturdy pioneer

entered the coal industry, beginning the mining of coal in the then Blakely township. The breaker referred to built by Mr. Richmond and Mr. Wurts [Richmond No. 3], was burned in 1883 and another was built in 1885 in the Second ward of Scranton, which was sold in 1888 [emphasis added]. In 1863 the firm of Richmond & Co. was merged into the Elk Hill Coal & Iron company, Mr. Richmond eventually becoming president, chief stockholder, treasurer and general manager of the company until 1899 when the important sale of the stock of the company which carried his coal interests was made to the New York, Ontario & Western Coal company. In 1891 the company developed a coal tract at Richmondale, near Vandling, which became a thriving community. It was here [Richmond No. 4] that Mr. Richmond introduced a novel idea in coal mining, the erection of a steel tower over the shaft from which the coal was emptied automatically from the car without leaving the carriage and carried by gravitation to the breaker [emphasis added]. / He was one of the directors of the Ontario, Carbondale and Scranton railroad, a branch of the New York, Ontario and Western railroad, and to encourage the building of the road he made the first offer of 50,000 tons of coal yearly as freight and later the full production of the colliery at Richmondale. . .

Here is a biographical portrait of W. H. Richmond that was published in *Mining and Metallurgy*, June 1922, p. 45. Our thanks to John V. Buberniak for bringing to our attention this biographical portrait.

WILLIAM HENRY RICHMOND died on March 14, 1922, in the 101st year of his age.[Interred in Dunmore Cemetery; beautiful mausoleum] He was the eldest son of William Wadsworth and Clarissa (Bailey) Richmond, and was born in Marlborough, Hartford County, Conn., on Oct. 23, 1821. He was educated in the public schools of his native place, and at a select school in Middle Haddam, Conn., taught by Israel M. Buckingham, brother of Governor Buckingham of Connecticut. In his 13th year, he entered business life as a clerk in a store at Middle Haddam, Conn. The panic in 1837 crippled his employer's business so that there was no work for the lad, and he returned to his home, where he found a similar condition of affairs. He remained on the home farm for five years, attending school, working on the farm and in the shop. In 1842, failing to secure employment in Hartford, he visited an uncle in Dutchess county, New York; there he met Robert H. Moore, of Socrates, N. Y., a merchant, and went with him to Honesdale, Pa. He remained in Mr. Moore's employ for three years, and then established a general store in Carbondale, Pa., in partnership with a Mr. Robinson, under the firm name of Richmond & Robinson. In 1853, Mr. Richmond became sole proprietor of the business. Two years before, the firm had established a factory for making doors, sash, blinds, coal cars and other wood work, and had installed woodworking machinery. In 1859 and 1860, eight hundred coal cars were built at his factory, with the exception of axles and wheels, for the Delaware & Hudson Co. for use on the gravity railroad leading to Honesdale [emphasis added]. In January, 1860, Mr. Richmond commenced mining coal in Blakeley township, near Scranton, Pa. under the firm name of Richmond & Co., his partner being Charles P. Wurtz, general superintendent of

the Delaware & Hudson Canal Co. They erected one of the first coal breakers on the line of that road, and commenced the breaking, screening and assorting of the coal for market, the previous practice having been to ship it in lump from the mine. In 1863, the firm was merged into the Elk Hill Coal Co., by special charter, with Mr. Wurtz as president and Mr. Richmond as treasurer and manager. The latter was actively an anthracite coal operator with mines near Scranton and north of Carbondale until about 1904, when he sold his interests and retired from business activities. Mr. Richmond was a member of the American Institute of Mining and Metallurgical Engineers; National Geographic Society; Franklin Institute; Scranton Board of Trade; the New England Society of Northeastern Pennsylvania; Connecticut Society of Sons of American Revolution; the Society of Mayflower Descendants; American Association for the Advancement of Science; American Bible Society; and served as treasurer of the Lackawanna Bible Society for the last thirty years. While in political views, Mr. Richmond agreed with many of the principles of the Republican party, he gave his loyal support to the Prohibition party, whose candidate for Congress in the twelfth district he was in 1868 and in 1904. For many years he was actively identified with the Presbyterian church, and his name appears frequently on the contribution lists of many religious organizations. A man of many parts, keen and farsighted in business dealings, of deep and true religious conviction, a liberal supporter of the arts and sciences, and a citizen of strength and character, Mr. Richmond was one of the most distinguished members of Scranton society.”

Mr. and Mrs. William Henry Richmond, basic biographical facts:

William H. Richmond was born in Marlborough, Hartford County, CT, October 22, 1821. W. H. Richmond and Lois Roxanna Morss were married at Prattsville, Greene County, NY, June 5, 1849. W. H. Richmond died on March 14, 1922, in the 101st year of his age. Lois Roxanna (Morss) Richmond (daughter of Foster Morss, born November 6, 1823 in Windham, Greene County, NY) died at the age of 86 on July 11, 1909 at Richmond Hill Farm, Scranton. Both are interred in the Richmond Mausoleum, Dunmore Cemetery.

Mr. and Mrs. W. H. Richmond resided at Richmond Hill in Scranton. Here is a view of Richmond Hill that is presented in *City Atlas of Scranton, Pennsylvania*. (G. M. Hopkins, C. E., Philadelphia, 1877):



Richmond Hill Farm was completed in 1874. The farm was comprised of one hundred acres. On the farm, the English system of 'soiling' cattle was pursued, with satisfactory results.

Here is the article on Richmond Hill Farm that is included in 1880 (P. 467):

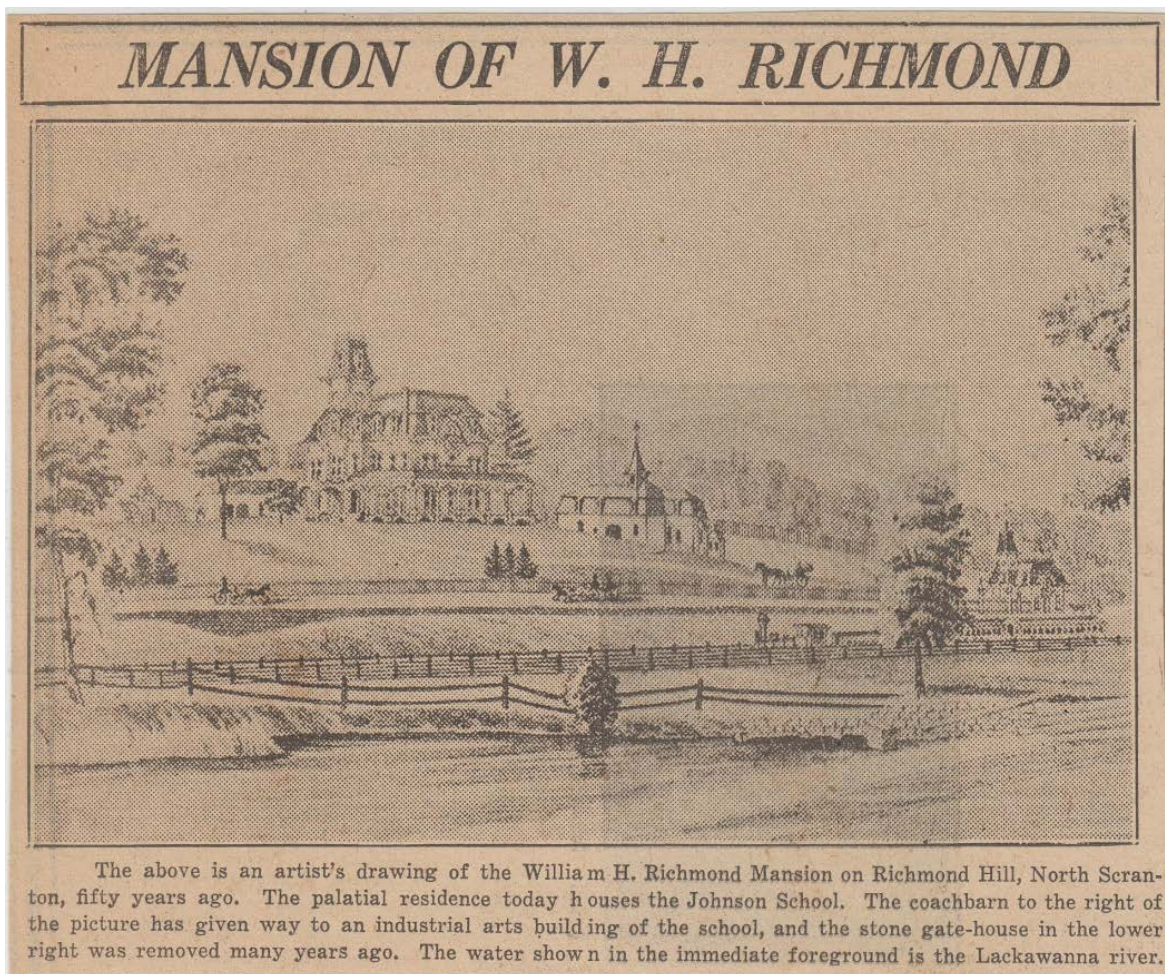
"RICHMOND HILL FARM. The elegant mansion of William H. Richmond, the treasurer of the Elk Hill Coal and Iron Company, completed in 1874, is a fine specimen of modern architecture and embodies some ideas of its owner that are well worthy of note, among which are its superior arrangements for heating by steam, the sensible location of registers at exposed points, a perfect and thorough ventilation, and a uniform heat secured at a very low pressure. Near this house are two spacious greenhouses, to the contents of which an experienced Scotch gardener is constantly adding; milk, carriage and boiler houses, and a fine poultry house and yard. In the barn yards may be seen the finest specimens of Jersey cattle, the importation and breeding of which is part of the business of the farm. Ever part of the hundred acres is being bought under the best of treatment, and experiments in various crops afford the owner employment for his leisure and the pursuance of his favorite theory of improving the farms in this vicinity. The English system of 'soiling' cattle is pursued, with satisfactory results."

Here is a copy of a line drawing of Richmond Hill that is included in one of the Gritman scrapbooks in the collection of the Carbondale Historical Society.



Attached to the reverse of this line drawing is a handwritten note which reads, in part, as follows: "At The Luncheon given by Mrs. W. H. Richmond at her home at Richmond Hill Scranton Nov 6th 1900 to her guests, namely, / Mrs. W. P. E. Morss, Carbondale / Mrs. H. R. Lathrope, Carbondale / Mrs. Israel Crane, Carbondale / Mrs. P. C. Gritman, Carbondale. . ."

In the 60th anniversary edition of *The Scranton Republican*, Saturday, May 28, 1927, p. B-10, is the following drawing of the Mansion of W. H. Richmond (present-day Johnson School):



The present-day Johnson School of Technology was the former Richmond estate. The following article about the Richmond estate and about W. H. Richmond was published in *The Scrantonian*, Sunday, June 26, 1983, p. A15:

"Coal Barons' Generosity Founded School": "Recent graduation ceremonies at the Johnson School of Technology brings to mind some of the history of the School, especially the benefactions of two of Scranton's wealthy coal operators. / Too often it is easy to criticize the former coal barons of this area saying that they robbed the county of much of its rich natural resources and then removing from the area, they left behind only the bad results of coal mining such as mine caves and burning culm dumps. Such was not the usual case, especially in regard to the Johnson School which was founded in 1912 with a trust fund established by O. S. Johnson, a wealthy coal operator of Scranton. The School's fine campus located at 3427 North Main Avenue is situated on the former estate of William H. Richmond, another successful coal baron of the last

century. / The Administration Building of the Johnson School is a large former Victorian mansion which for over 40 years was the home of William H. Richmond and his family. A very interesting and energetic character, Richmond lived to the advanced age of 100 years and became known as the 'Grand Old Man of Scranton.' / William H. Richmond was born in 1821 in Marlborough, Hartford County, Conn. and came from a long Yankee lineage. He first located in Honesdale as a young man where he worked as a clerk in a general store. In 1845 he moved to Carbondale where he opened his own store and later operated a door and sash mill as well. By 1860 he was successful enough to become involved in coal mining. He and a partner opened a coal mine in lower Blakely Township which was chartered as the Elk Hill Coal and Iron Co. in 1863. / In what is now Dickson City, he built one of the earliest coal breakers in the area. The enterprise prospered so that he later became general manager and entire owner of the mine, eventually becoming one of the wealthiest independent coal operators in the county. By shrewd Yankee ingenuity and hard work, Richmond amassed a very sizeable fortune. In 1893 he opened another mine in Fell Township and built a mining town around the breaker there which is still called Richmondale, located adjacent to Vandling. / He was one of the organizers and owners of the Carbondale Gas Co. and the Crystal Lake Water Co. and was a director of the Third National Bank. A shrewd and blunt businessman, he was also generous and honest in all of his dealings. In religious faith he was a staunch Presbyterian and a strict temperance man. He did much to promote the industrial development of the Lackawanna Valley and the building of Dickson City Borough. / Richmond was also a devoted family man. He married in 1849 to Lois R. Morss of Windham, Green Co., New York. They became the parents of three daughters and resided in Carbondale until 1874 when they moved into a stately Victorian mansion Richmond had erected on North Main Avenue near the Dickson City line. The three story brick house was surrounded by porches, sloping lawns and gardens. There was a 65 acre farm included where Richmond delighted in raising racing horses and purebred Jersey cattle. The Richmonds thoroughly enjoyed their large home, often entertaining relatives and friends. They resided in the home for many years, celebrating there their 60th wedding anniversary in 1909. Mrs. Richmond died one month later at the age of 86. / Their three daughters, Mary, Emmiline and Clara, were all graduates of Vassar College and two of them married prominent men. Mary [graduated from Vassar in 1876] married Frederick K. Tracy of Mansfield, Ohio, who became a vice president of the Elk Hill Coal Co. and a successful Scranton attorney. The Tracys lived at 1120 Columbia St. and had five children. Emmiline, the second daughter, married Dr. Julius Dreher, who was president of Salem College, Roanoke, Va., at the time. Later, he became U. S. Consul in Tahiti, Jamaica, Panama and Toronto. Clara, the third daughter, never married, remaining at home with her parents and lovingly caring for her father in his advanced years. / In 1899 Richmond disposed of all of his coal properties. His Dickson City mine later became the Storrs Colliery which was operated by the Glen Alden Coal Co. until it closed in 1952. He lived to celebrate his 100th birthday, dying at his winter home in Daytona, Florida, in 1922, almost a year later. / When approached by the trustees of the O. S. Johnson Trust, Richmond generously donated his home and farm for the establishment of the Johnson Manual Training School. This he did in 1916 for a nominal annual

payment to his daughter Clara. The home he had loved and enjoyed for so many years soon became a busy school and training center for the youth of the area. / The school was founded through the generosity of another wealthy Scranton coal operator, Orlando S. Johnson. Born in New York City in 1847, Johnson came to Scranton in 1864 and for several years worked as a clerk in the Connell Brothers store and the Hunt Hardware firm. In 1876 he became involved with several partners in the Green Ridge Coal Company where he first served as superintendent and eventually became the sole owner. The mine was located on North Washington Avenue and Poplar Street and the large breaker there was long known as the Johnson Breaker. [See note below on Green Ridge Breaker and Orlando S. Johnson.] Later he helped to organize the Lackawanna Coal Co. and was one of the organizers and directors of the County Savings Bank and the Scranton Textile Co. A successful and skillful businessman, he assembled a very handsome fortune during his lifetime, the value of which was estimated at \$1.5 million at the time of his death in 1912. / The School used the Richmond mansion for offices and classrooms. In later years, through the generosity of C. S. Woolworth, A. H. Bingham, G. W. Weaver, and Robert Y. Moffat Sr., other buildings and facilities were erected on the grounds. For the past 60 years, the Johnson school of Technology has trained thousands of young men and women from this area in industrial and technical arts. Since 1966 John R. O'Hara has been president. The school now has over 550 students and recently graduated 160, the largest graduating class in its 62 year history. / The foregoing article was researched and written by William P. Lewis, executive director of the Lackawanna Historical Society."

Green Ridge Breaker: "The Green Ridge Coal Company operated the Green Ridge Breaker (referred to as the Johnson Breaker), located between Poplar and Walnut Streets and Adams and Jefferson Avenues, in 'Johnson's Patch.' The Green Ridge Coal Mine was opened in 1870 by George Filer, Frank Marsh and James P. W. Riley, under the firm of Filer, Marsh & Riley. Mr. Filer shortly retired from the firm and Marsh & Riley continued operating until driven to the wall under the financial stress of 1875-76, when E. R. Willard, Milo Wilson, Orlando S. Johnson and and Edward P. Kingsbury and later L. A. Watres took over the mine and continued operation until it became the property of the corporation chartered under the name Green Ridge Coal Company, of which Mr. W. L. Connell was president." Rudy Kunz, Dunmore Historical Society

Here are two views of *Richmond Hill / The Orlando S. Johnson Manual Training School, Administration Building* that were taken by the author of June 30, 2011:



The Orlando S. Johnson Manual Training School, Administration Building



The Orlando S. Johnson Manual Training School, Administration Building

It would be well to review here some of the many noteworthy and remarkable facts about William Henry Richmond, who was born October 22, 1821, and who died on March 14, 1922, age 101.

- At the age of thirteen (1834) Richmond left school and began his career in the world. For three years he was a clerk in a grocery store at Middle Haddam, CT, but after the panic of '37 went back to the family farm. In 1842, failing to secure employment in Hartford, he visited an uncle in Dutchess County, New York. There he met Robert H. Moore, of Socrates, NY, a merchant, and went with him, in 1842, to Honesdale, PA, where he became a clerk in the store of R. H. More. He remained in Mr. Moore's employ for three years (1842-1845).
- In April 1845, Richmond & Robinson rented the building on the southeast corner of Salem Avenue and Main Street in Carbondale and established a general store. They sold general merchandise, except intoxicating liquors. In 1851, Richmond & Robinson established a factory for making doors, sash, blinds, coal cars and other wood work, and had installed woodworking machinery. Also in 1851, Richmond became the sole proprietor of the business. On Sept 15, 1855, the store—and a large number of buildings on Main Street below—were burned.
- In 1855, Richmond erected a new building on the same site. In the first part of January 1856, the store was filled with a full stock of goods and ready for business. Richmond's Hall was on the third floor of William H. Richmond's 1855 store at the corner of North Main Street and Salem Avenue. A grand opening of Richmond's Hall was held on January 25, 1856, the evening just before business was resumed at Richmond's store on the street level. A large number of business men of Carbondale and vicinity were assembled, and after refreshments a number of speeches were made, notably one by the rising young lawyer Philo Callender Gritman, one of the most civic-minded and public-spirited individuals in the entire history of Carbondale. In his stirring talk, P. C. Gritman spoke prophetically of the grand outlet for the transportation of coal to the north and west by railroad that would one day be built along the banks of the Lackawanna River. It was in Richmond's Hall that Horace Greeley spoke during his 1860 visit to Carbondale.
- In 1859 and 1860, eight hundred coal cars were built at W. H. Richmond's factory, with the exception of axles and wheels, for the Delaware & Hudson Co. for use on the Gravity Railroad to Honesdale.
- W. H. Richmond occupied his new building until 1865, when it was leased to the Messrs. Crane; in 1867 or 1868, Richmond sold the building to Messrs. Pascoe Baker and Scurry.

- In 1860, W. H. Richmond & Co. opened a coal breaker in Blakely Township/Providence. In 1860, D&H Gravity Railroad coal cars, Gravity gauge, went directly to the Von Storch and Richmond breakers in Providence (see *Valley Road summary*). The Richmond Breaker in question was Richmond No. 3. This breaker was the first on the Gravity Railroad between Carbondale and Scranton. It was operated by Richmond & Co. until 1863, when W. H. Richmond, Charles P. Wurts, George L. Morss, Alfred Wirtz and G. L. Dickson organized the Elk Hill Coal and Iron Company, and succeeded to the ownership of the mine and breaker, with C. P. Wurts as president of the company and with W. H. Richmond as treasurer and manager. The Elk Hill Coal Company (W. H. Richmond was the general superintendent) operated what are described in the article about the fiftieth wedding anniversary of Mr. and Mrs. W. H. Richmond (*Carbondale Leader*, June 5, 1899, p. 5) as "two of the richest collieries in the anthracite coal fields. Colliery No. 3 is in Dickson City, near the palatial home of Mr. and Mrs. Dickson. Colliery No. 4 is five miles above this city [Carbondale
- Richmond Hill Farm was established in 1874.
- Richmond Breaker No. 3, Providence, Blakely Township burned down in 1883. The breaker was rebuilt in 1885 in the Second Ward of Scranton (now part of Dickson City), and sold in 1888 (to later become the Storrs Colliery which was operated by the Glen Alden Coal Co. until it closed in 1952).
- The D&H purchased three tracts of land (44,920 feet) in North Scranton and Dickson City from W. H. Richmond and his wife in 1907. The text on a clipping in a Gritman scrapbook, dated August 31, 1907, reads as follows: **"W. H. RICHMOND SELLS COAL LAND** / The Delaware and Hudson company has acquired more than 50,000 square feet of coal land located in North Scranton and Dickson City. Three tracts, consisting of 44,920 feet, located in North Scranton and Dickson City, were purchased outright from William H. Richmond and Lois R. Richmond, his wife. All the tracts are in close proximity to the tracks of the company, and it is said, connect with its present workings, so that they will easily be mined." (clipping in Gritman scrapbook, dated August 31, 1907)
- Richmond Breaker No. 4, Richmondale, was built in 1893, five miles north of the city of Carbondale, when a shaft was sunk to two veins of coal at a depth of two hundred and two hundred and twenty feet below the surface, over which was erected a steel tower, fifty-two feet square at the base, and one hundred and eighty-seven feet in height. Coal shipments were made over the Richmondale branch of the New York, Ontario & Western road [this branch connected with the main line of the O&W at Northwest Junction] to the points of delivery.

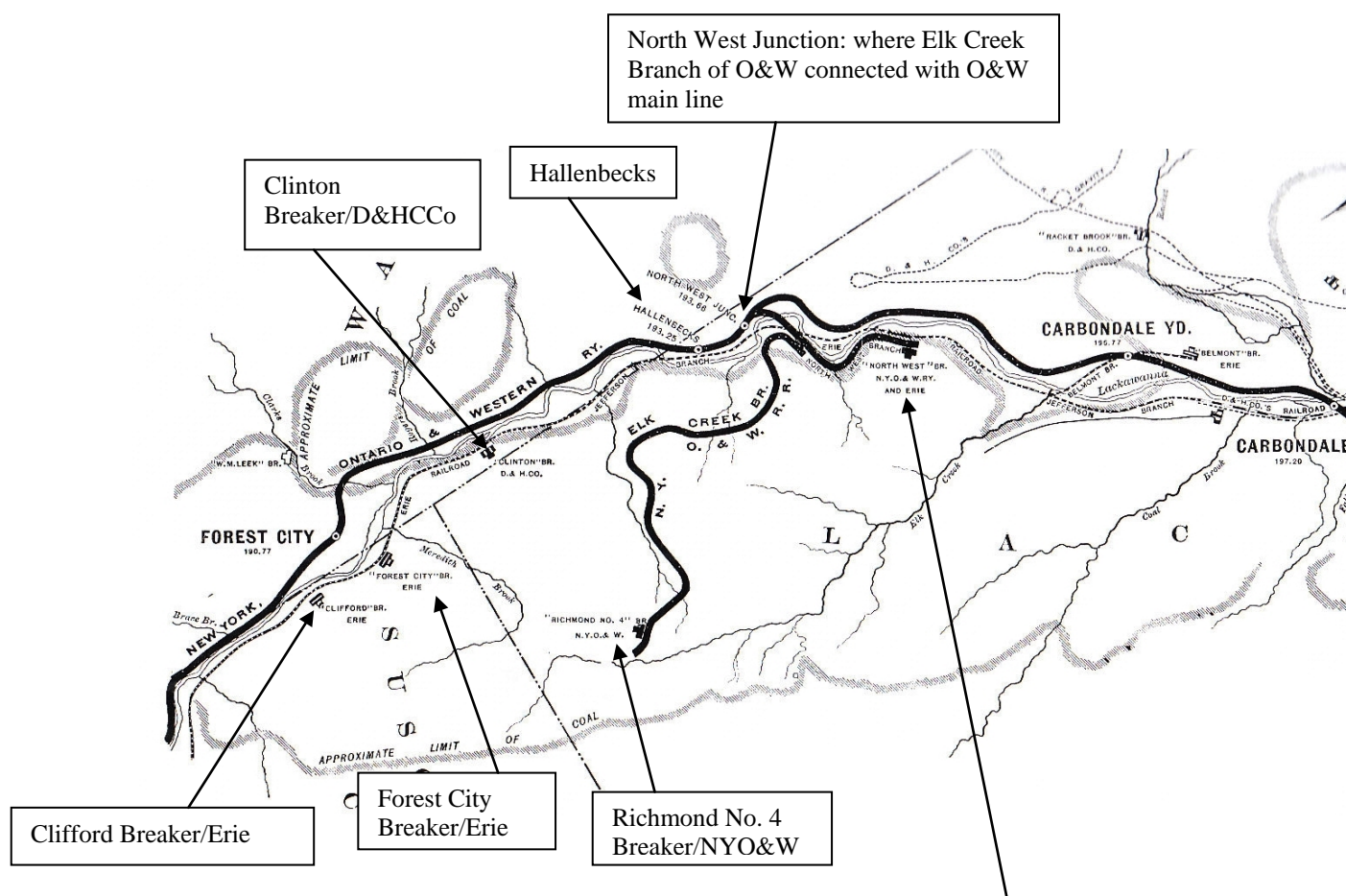
1902

Richmond No. 4 Breaker

Richmondale, PA

See *Walsh*, pp. 23-24, for a list of the name of workers killed at this colliery.

Richmond No. 4 breaker was located on the Elk Creek Branch of the O. & W. R. R.—see map below:



The original of the photographs of the Richmondale Breaker given below is in the holdings of the Forest City Historical Society. This photograph was made available for publication here by Peggy Brager on May 31, 2017:



In July 1893, it was announced in a Carbondale newspaper, that a new breaker would be erected in Fell Township by W. H. Richmond on property that belonged to the estate of George Lord Morss. Here is that announcement on a newspaper clipping in one of the Gritman scrapbooks, dated July 12, 1893:

"RICHMOND NO. 4. / THE NEW BREAKER ERECTED IN FELL TOWNSHIP / A Profitable Property That Is Now to Be Developed—A Village Springing Up. / PURCHASERS of wild lands in this vicinity fifty years ago literally 'struck it rich' for the coal measures which were supposed to extend no farther than this city on the north, and in the immediate valley of the Lackawanna, are proving more widespread than the predictions of the early mineralogists would warrant. The immense amount of anthracite now being taken from the fields above the city would surprise some of the pioneer miners of this region could they return to look over the scenes of their former labors. Among the latest underground explorations that have been made are those on a tract of land in Fell township which has been secured by W. H. Richmond of Scranton. The tract of land is a thousand acres in extent, and is five miles from this city and two and one-half miles southwest of Forest City. The property belongs to the estate of G. L. Morss, and was long under consideration as to whether it was desirable property for coal development. Mr. Richmond learned that it was, and the boring of 180 feet below the surface found an excellent vein of coal and fifty feet lower another vein. These strata lie on the same plane with those of Forest City and Carbondale, and the quality of coal is the same as shipped from the Hillside colliery and the Delaware & Hudson colliery at Clintonia. The coal will be shipped by the Ontario & Western from a branch that runs off from the Northwest breaker, a distance of three miles, which the railroad company are building. / Richmondale is the name of the village that will surround this breaker. It will comprise 1,000 inhabitants and the dwellings will be better than the usual of mining hamlets." (clipping in Gritman scrapbook, dated July 12, 1893)

In the January 9, 1894 issue of the *Carbondale Leader* it was announced that the Richmondale shaft was complete and in working order. There are two veins of coal found in the shaft, one of which is eight and the other nine feet in thickness. The veins being twenty-six feet apart, the depth of the shaft is 226 feet to the lower vein. The breaker has a capacity of 1,500 tons daily. The unique features of this new colliery, which was designed by W. H. Richmond, are described in this article, as follows:

“RICHMONDALE COLLIERY. / Entirely New Thing in Hoisting and Dumping Coal. / A Cut of the Works Just Above This City Which Promises to Revolutionize Present Methods. / The new Richmondale shaft above this city is now complete and in working order. The structure differs from anything of the kind in the coal regions and possibly in the world, the tower being constructed exclusively of wrought iron. Its height is 187 feet; width at base 50 feet, at the top []. The carriages are also constructed of iron. They are hoisted to the top of the tower and the coal from the cars is dumped into a chute from whence it is conveyed by gravitation into the breaker a distance of 206 feet. The chute through which the coal runs is four feet wide, having walks along either side of two feet in width. The pitch of the chute is four and one half inches to a foot. The pitch was found to have been too great and a number of gates have been arranged at intervals in order to prevent the coal from going into the rolls with too great a

velocity. The design of the entire structure was arranged from plans conceived by W. H. Richmond, the general superintendent of the Elk Hill coal company. Whether or not the new arrangement will be a success time alone can determine. However, at present everything works like a charm with the exception of the pitch of the chute, and the indications are that it also will be a complete success. There are two veins of coal found in the shaft, one of which is eight and the other nine feet in thickness. The veins being twenty-six feet apart, the depth of the shaft is 226 feet to the lower vein. The breaker has a capacity of 1,500 tons daily. It is situated about one-half mile from the Delaware & Hudson and Ontario & Western railroads. The coal is shipped over the latter road. / The above cut and description are taken from the Scranton Republican." (*Carbondale Leader*, January 9, 1894, p. 2)

In 1899, in what was believed to be premature blast at Colliery No. 4 in Richmondale, Andrew C Carter, from Jermyn, the father of eight children, was fatally injured, and his laborer, John Thomas, age 18, from Mayfield, was badly injured. Here is the account of the accident that was published in *Carbondale Leader* of August 4, 1899:

"INJURED MINER IS NOW DEAD. / Andrew Carter, an Esteemed Jermyn Miner, Succumbs to Injuries Received at Richmondale Yesterday. / Jermyn, Aug. 4. / Andrew Carter, a well known man residing on Second street in this borough, was fatally injured at the No. 4 colliery Richmondale last evening. His laborer John Thomas was also badly injured and now he lies at the Emergency hospital. / The cause of the accident was not definitely known last evening but was believed to be a premature blast. / The men were working a double shift and at the time of the accident no one was present with the men when the driver went up with his cars he discovered both men lying unconscious. He gave the alarm and willing hands at once set to work to carry the men outside. This was done about half past six o'clock and they were carried into a church nearby where a physician attended them. Carter had both legs fractured one being badly crushed. / He was brought here [Jermyn] at 10 o'clock last evening and was attended by Drs. S. D. Davis and I. S. Graves. In addition to the injuries already described he had a severe gash in the top of his head which the doctors dressed and stitched. His pulse was then quite feeble and both doctors expressed their opinion that he would not survive the shock. / He died at half-past seven o'clock this morning. Deceased was forty-three years of age and is survived by a wife and eight children who are almost crazed by their sudden affliction. He was the son of Barnabas Carter one the pioneers of this borough, and had been a resident since early boyhood. He was a man who had not an enemy and whose quiet and unassuming manner and sympathetic nature had attached himself to every one he came in contact with. Few men in any community stand as high in the estimation of their fellow men as Andrew did and when the news of his injury was brought here last night his home was besieged with people from all parts of the borough. He has three brothers in the west and is a brother of Barnabas Carter of Cemetery street and Mrs. Jesse Avery of Main street. He was a member of Aurora lodge, Free and Accepted

Masons and Rushbrook lodge of Odd Fellows. The funeral arrangements will appear tomorrow. / THE OTHER MAN. / John Thomas the other injured man is the son of William Thomas of Mayfield yard. He is about eighteen years of age and only recently started to work in the mines. His father has just been discharged from the hospital where he spent several months from injuries received in the mines and has not yet been able to work. Johnny, as he is familiarly called, is the sole support of his parents and for many years was a *LEADER* carrier.” (*Carbondale Leader*, August 4, 1899, p. 5)

The area where Richmond No. 4 Colliery and Richmondale are located were part of the estate of G. L. Morss, whose obituary was published in the *Carbondale Leader* of August 4, 1882, p. 3. George Lord Morss, reputed to be the wealthiest man in this region of the country, was the brother of the wife of William Henry Richmond. Here is that obituary:

"DEATH OF G. L. MORSS. / Mr. G. L. Morss, one of our most prominent and wealthy citizens, died at his residence in Fell Township last Monday morning. The deceased was born in Greene county, N. Y., nearly sixty-six years ago. He was the son of Foster Morss one of the pioneer settlers of that county, who was engaged for many years in the business of tanning. The deceased, when he struck out for himself took up the same line of business, and came into this region in 1840 at which time it presented an inviting field for such enterprise. Since that time his tannery here has been carried on under his supervision and has become known as an extensive establishment far and wide. He also for a time had a large interest in a tannery at Uniondale, where he owned a large farm. His business affairs were successfully conducted, and by investments from time to time in coal lands he accumulated a very large property. He was reputed to be the wealthiest man in this region of the country [emphasis added]. In personal habits Mr. Morss was frugal and industrious, and of a retiring disposition. He was exceedingly plain, and prosperity did not seem to affect his conduct in his intercourse with his fellow men. He was jovial and pleasant in his manners, and was greatly esteemed by those who have been in his employ. Until the past year he enjoyed excellent health, when he was attacked by what was supposed to be Bright's disease, to which he speedily succumbed. He leaves a wife and four daughters. The funeral took place Wednesday afternoon,--Rev. Thomas Barker, rector of Trinity church, conducting the services. The remains were interred in Maplewood cemetery, where his mother, the only other member of the family who has died in this region, lies buried."

Here is the George L. Morss obituary from the *Carbondale Advance*, August 5, 1882, p. 3:

"Death of George L. Morss. / It is our painful duty to record this week the death of George L. Morss, who has been widely known for about forty years as one of the prominent business men of Northeastern Pennsylvania. He died at his residence near his well-known tannery—the Lorillard—one and a half miles North of this city, on Monday, July 31st, ult. at 12:15 a.m. /

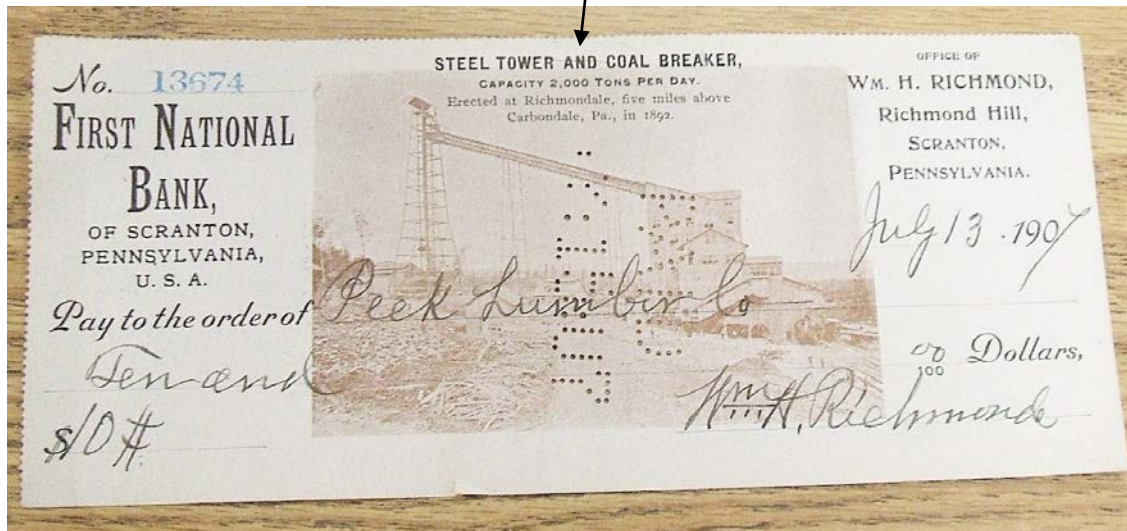
Deceased was born in Windham, Greene Co., N. Y., in May, 1816, and came to this vicinity, and purchased the tannery on the Lackawanna, near town, where he has since resided, in the year 1840. Some of his brothers were at first associated with him, but subsequently went into business elsewhere, leaving him, as he has been, for more than thirty years, as sole proprietor. / Mr. Morss, beside his two brothers, Judge D. K. Morss and Wm. P. E. Morss residing here, had two other brothers: Burton G. Morss, of Red Falls, N. Y.; Capt. Dwight F. Morss, of Syracuse, N.Y.; and one sister, Mrs. Wm. H. Richmond, of Richmond Hill Farm, Scranton [emphasis added]. /He leaves four daughters: Mrs. L. S. Morss, of Ledgedale, Wayne Co.; Mrs. J. W. Aitken, of this city, and two remaining at home. / Funeral services conducted at the residence at 3 p.m., on Wednesday, by Rev. Thomas Barker, were very impressive.” (*Carbondale Advance*, August 5, 1882, p. 3)

From an article that was published in the August 26. 1882 issue of the *Carbondale Advance*, we learn that George Lord Morss, although leaving a large estate, left no will, and that Mrs. Morss will administer upon the personal property assisted by William P. E. Morss, the youngest brother of the deceased, and the heirs take charge of the real estate, assisted by William H. Richmond, Esq. Here is that article:

“The Morss Estate. / It is stated that the late G. L. Morss, whose death we chronicled two weeks ago, although leaving a large estate, left no will. It is reported that Mrs. Morss will administer upon the personal property assisted by Wm. P. E. Morss, the youngest brother of the deceased, and the heirs take charge of the real estate, assisted by Wm. H. Richmond, Esq., coal operator at Dickson. The lands embrace about 1,000 acres, much of it containing coal.” (*Carbondale Advance*, August 26, 1882, p. 3)

Here is a copy of a cancelled check, dated July 13, 1907, from W. H. Richmond to Peck Lumber Company for \$10.00. The bank account was at the First National Bank of Scranton. This check was available for purchase on E-Bay on February 29, 2016:

"Steel Tower and Coal Breaker, / Capacity 2,000
Tons per day. / Erected at Richmondale, five miles
above / Carbondale, Pa., in 1892"

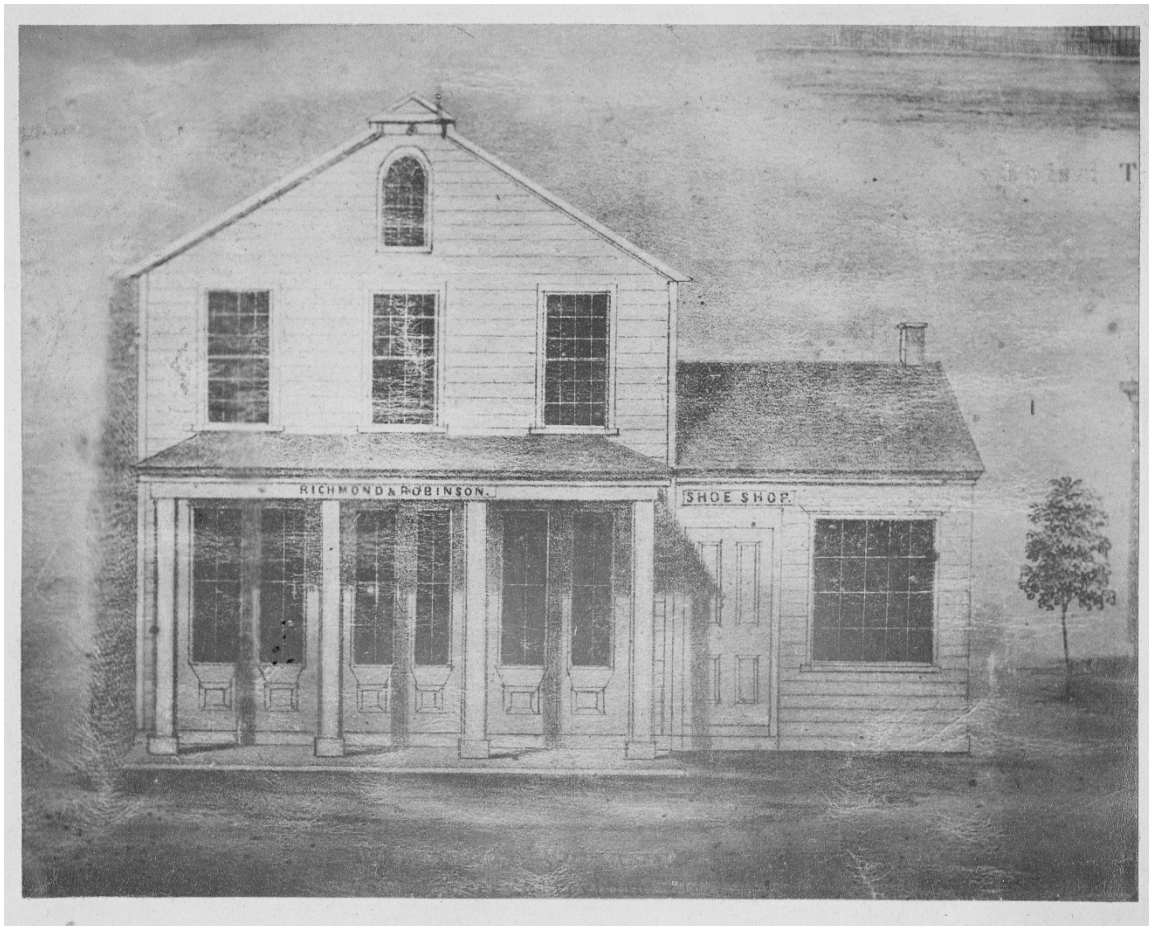


Here is a copy of a voucher for \$5 from W. H. & J. E. Richmond, Luzerne County, Pennsylvania. This voucher was sold on E-Bay on September 1, 2015.



We will conclude this look at the Richmond Breakers with a look at the Richmond and Robinson store in Carbondale:

Here is a photograph, from the archives of the Carbondale Historical Society (Gritman Collection), of the Richmond and Robinson store that was located on the southeast corner of the present-day intersection of Salem Avenue and Main Street, Carbondale:



On the reverse of the photograph, W. H. Richmond, himself, wrote the following: “Photo of the first, or one of the first, framed buildings erected in Carbondale, about 1829 or 30. The front at that time was a plain door and windows like those in second story. A new front with porch and pillars was put in April 1845 when Richmond and Robinson rented the building and commenced business, with stock of general merchandise, except intoxicating liquors. The store building was erected it is understood by Salmon Lathrope [the father of the senior editor of *The Carbondale Leader* in May 1895]. Wm. H. Richmond succeeded to the business of R&R in 1851 and the store building was burned in Sept 15th 1855, as also a large number of buildings on Main Street

below, fire originating in building near where now stands M&M Bank. In January 1856, the store building now occupied by Messrs. Scurry & Co was occupied by Mr. Wm. H. Richmond and it was understood to be the most imposing store building in north Eastern Penna. and Mr. Richmond continued business in it until 1865 when it was leased Messrs. Crane, and in 1867 or 8 sold by him to Messrs. Pascoe Baker and Scurry. / Wm. H. Richmond / Richmond Hill, Scranton Pa” This photograph is reproduced in the 1901 *Historical Souvenir of Carbondale, Penna.*, wherein we learn that the addition on the right side of this building, marked “SHOE SHOP,” was Carbondale’s first post office.

Here is an electronic scan of an original store receipt from Richmond & Robinson’s store (“Wm. H. Richmond Cha’s A. Robinson”) on Main Street, Carbondale. The receipt is among the John Godding papers (Xerox copy in the archives of the Carbondale Historical Society) in the collection of Bill Wallis, Carbondale.

“RICHMOND & ROBINSON, / Dealers in
Staple and Fancy Dry Goods, Boots &
Shoes, Hats, Caps, Furs, Hardware,
Crockery, Groceries, Provisions, &c. &c.”

Carbondale, Pa., 185 *8*

Mr. *John Godding*
Terms, *]* B^YT of RICHMOND & ROBINSON.
Dealers in Staple and Fancy Dry Goods, Boots & Shoes, Hats, Caps, Furs, Hardware, Crockery, Groceries, Provisions, &c. &c.
WM. H. RICHMOND. CHA'S A. ROBINSON.

<i>Sept</i>	<i>17</i>	<i>20 2 1/2 Bu Oats 4/</i>	<i>1 00</i>
<i>Sept</i>	<i>23</i>	<i>1/2 Doz Blue & Dining Plates 19-</i>	<i>62</i>
		<i>1 Set Do. n. Vases & 1 Set Cup Plates 36</i>	<i>69</i>
		<i>1 n Napkins 3/6</i>	<i>114</i>
			<i>2 75</i>
<i>Oct 7</i>		<i>Recd Pay</i> <i>Richmond & Robinson</i>	

Here is a photograph, from the archives of the Carbondale Historical Society, of the building that was erected by W. H. Richmond on the same site, following the 1855 fire.



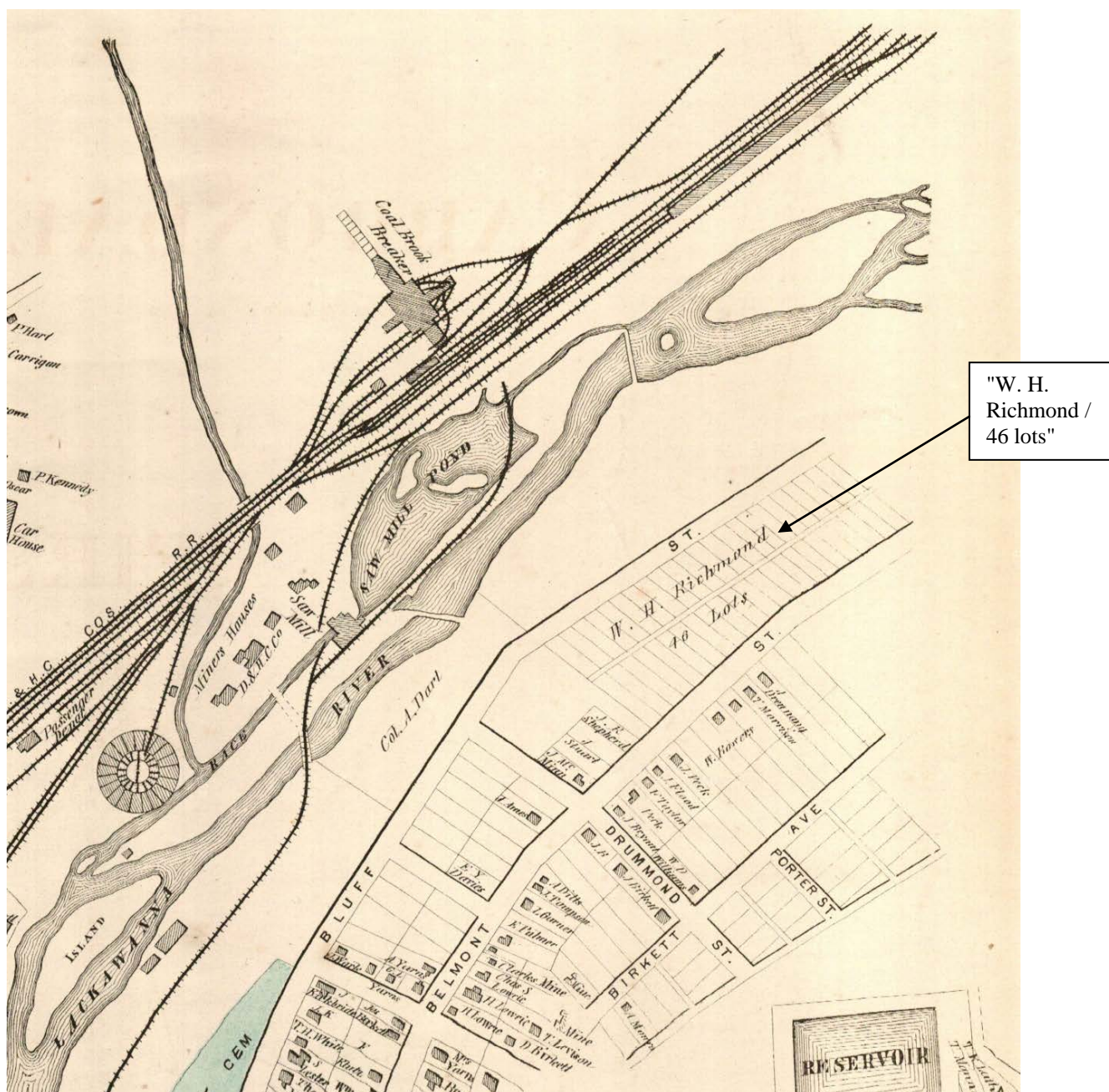
The caption on the reverse of this photograph, in W. H. Richmond's own hand and dated August 7, 1901, reads as follows: "Photo of store building erected by Wm. H. Richmond in 1855 after the building was burned that was built by Salmon Lathrope in 1829 or 30 which stood upon the same ground, and it was understood to be the most imposing and convenient store building in North Eastern Penna, it was occupied by Mr. Richmond until 1865, and leased to Messrs. Crane, and in 1867 or 8 sold to Messrs. Pascoe Baker & Scurry. / The building was erected after the great fire of Sept 15th 1855, and in the first part of January 1856 was filled with a full stock of goods ready for business. A grand opening was held on the evening just before business was resumed, where a large number of business men of Carbondale and vicinity were assembled, and after refreshments a number of speeches were made, notably one by the rising young lawyer P. C. Gritman, who prophesized of the grand outlet for transportation of coal to the north and west

by R. Road that would some day be built along the banks of the Lackawanna River. The affair was reported by the late G. M. Reynolds who was owner and editor of the principal paper. / Wm. H. Richmond / Richmond Hill; Scranton / Pa / August 7th 1901”

Richmond's Hall was located over William H. Richmond's 1855 store at the corner of North Main Street and Salem Avenue, on the third floor. It was therein that Horace Greeley spoke during his 1860 visit to Carbondale.

In the obituary of P. C. Gritman, we read: "The opening of Richmond's hall, on the third floor of the Pascoe & Scurry building, Jan. 25, 1856, was a public event that was marked by a stirring and prophetic talk by Mr. Gritman."

At the time that the 1873 *D. G. Beers map of Carbondale* was drawn, W. H. Richmond owned 46 lots at the north end of present-day Cemetery Street (then called Bluff Street). The lots were located between Cemetery Street and the Lackawanna River. In 1873, present-day Robinson Avenue was called Cemetery Street. Here is a detail from that map that shows the exact location of those 46 lots:



Detail of *D. G. Beers* 1873 map of Carbondale

1903

Riverside Coal Company Breaker

This breaker was operated by the Riverside Coal Co., Archbald, and served by the O&W Railway.

The Riverside Breaker in Peckville burned to the ground on May 11, 1898. Four hundred and fifty men and boys worked in the breaker, which had a capacity of 1,000 tons a day. In the article on the fire that was published in the *Carbondale Leader* of May 12, 1898, it was noted that this was the sixth breaker fire within a few months. Here is that article:

“RIVERSIDE BREAKER. / Peckville’s Big Colliery Burned to the Ground Last Night. / The Riverside breaker near Peckville was destroyed by fire between 9 and 11 o’clock last night. The origin is supposed to be of incendiary character. It was one of the largest in the valley and about 450 men and boys were employed in and about the shaft and breaker. The damage is estimated at \$75,000. The insurance will probably reach \$50,000. It was operated by the Ontario & Western railway company, and the general manager was Dr. J. N. Rice, of Scranton. / The breaker is situated three-quarters of a mile above Peckville, and lies in the lower part of Archbald borough. Hose companies from these places responded. At the time the fire started there were 28 men and boys at work in the shaft, some of them being a long distance from the ‘foot.’ Notification was sent to them without delay, and they made their exit by means of another opening, equipped with ladders. / It had a capacity of 1,000 tons a day, and was worked steadily. The most modern appliances for preparing the coal were used, and it was situated conveniently for shipping purposes. Its destruction will mean a big loss to the small army of men and boys employed in and around it. This makes the sixth breaker fire within a few months [emphasis added] in this valley.” (*Carbondale Leader*, May 12, 1898, p. 5)

1904

Russell B. Coal Company Breaker

This breaker, which is listed in the 1898 First District mine report, was operated by the Russell B. Coal Company.

1905

St. Nicholas Coal Breaker

This breaker was located in Mahanoy City, PA, and operated by the St. Nicholas Coal Company.

Given below is a copy of the Michael Rubinkam article for the *Associated Press*, April 29, 2015, on the St. Nicholas Coal Breaker in Mahanoy City.



“This Wednesday, April 29, 2015 photo shows the St. Nicholas Coal Breaker in Mahanoy City, Pa. When coal was king, its castle was the breaker, which crushed, washed and sized billions of tons of Pennsylvania anthracite for use in factories, foundries and homes up and down the East Coast. (AP Photo/Matt Slocum)”

Massive coal breaker, Pennsylvania's last, is coming down

Pennsylvania's last coal breaker, relic of a time when anthracite was king, is coming down

By Michael Rubinkam, Associated Press

MAHANOEY CITY, Pa. (AP) -- When coal was king, its castle was the breaker — an imposing fortress that crushed, washed and sized billions of tons of Pennsylvania anthracite for use in factories, foundries and homes up and down the East Coast.

Nearly 300 breakers loomed over the coal patch more than a century ago, playing a key role in the nation's rapid economic expansion and symbolizing the might of an industry that drew hordes of European immigrants who toiled, and often died, underground.

The breakers gradually disappeared as anthracite production began a long, steady decline after World War I. Today, only one breaker built during the historic era of anthracite mining remains standing — and now that, too, is coming down.

The St. Nicholas Breaker once held the distinction as the largest in the world, the size of a city block and capable of processing more than 12,000 tons of anthracite each day. Shuttered for more than 50 years, it now blights an area whose economy never fully recovered after anthracite's reign came to an end.

But its hulking, asymmetrical facade continues to draw vandals, curiosity-seekers and people with a connection to mining.

"It's part of our heritage," said Annette Trout, the granddaughter of a coal miner, during a recent visit.

The old breaker is about 100 miles northwest of Philadelphia in a region that holds nearly all of the nation's anthracite, a pure grade of coal that spawned the railroads, powered America's Industrial Revolution and dominated home heating in the East. At its peak, the anthracite industry employed more than 180,000 people in just a few counties of northeastern Pennsylvania.

Coal breakers made it possible.

Invented in the 1840s, breakers transformed large, hard-to-ignite chunks of raw anthracite into a variety of smaller sizes suitable for smelting iron, propelling a locomotive, running a machine or heating a building. A conveyor carried raw coal from the top floor through a variety of crushing devices and screens to the bottom, where the finished product — given names like egg, stove, chestnut and pea, according to size — was loaded onto rail cars and taken to cities like New York, Philadelphia and Baltimore.

"Outside of the mine, the breaker was the linchpin of the coal operation," said John Fielding, a curator with the Pennsylvania Historical and Museum Commission. "Without the breaker, anthracite coal wouldn't have been marketable. It wouldn't have been able to be used."

The breakers were as hazardous as they were indispensable to an industry that saw more than 30,000 men and boys die in mine collapses, explosions and other accidents. In the 1800s and early 1900s, so-called "breaker boys" as young as 8 picked out sharp pieces of slate and other impurities with their bare hands, working for dimes a day in the dust-choked gloom.

"They breathe this atmosphere until their lungs grow heavy and sick with it," wrote Stephen Crane, author of "The Red Badge of Courage," who visited a coal village and memorably described the breakers he saw as "enormous preying monsters, eating of the sunshine, the grass, the green leaves."

That was in 1894. Nearly 40 years later, St. Nicholas opened as the crown jewel of a relatively safer, more modern anthracite industry. The breaker and its twin at Locust Summit operated around the clock to meet the nation's dwindling but still substantial need for anthracite.

Ed Tobin, 88, whose four decades in the coal industry included a stint at St. Nicholas, remembered it as dusty and loud, "like thunder. Boom boom boom boom boom." He added: "Don't let anybody kid you. You didn't make much money, but you worked."

Joseph Peel's father and uncles found work at St. Nicholas after World War II, and he recalled hanging out there as a boy.

"You went to work nice and clean and came home filthy dirty. Every day it was tough," said Peel, 68, of Mahanoy City. "But that's the way it goes when you're working in the coal fields and in the coal mines and in a breaker."

Modern anthracite plants, like the one operated by Reading Anthracite a mile from St. Nicholas, process about 2 million tons a year for home heating, steelmaking and other specialty uses. But they require very few workers to operate, unlike the breakers of old, and production is a fraction of what it was when St. Nicholas roared to life more than 80 years ago.

Early last decade, there was talk of preserving the breaker, and state grant money was awarded for a study. But it would have taken tens of millions of dollars — a prohibitive sum — to turn the massive, out-of-the-way ruins into a historical attraction, and the idea was shelved.

"It was a fantastically unique building, but it was in bad shape," said Kurt Zwikl, executive director of the Schuylkill River Heritage Area.

The site might one day give birth to something more productive. Not far away, the company that owns St. Nicholas transformed a defunct mining operation into a successful shopping center.

In the meantime, crews are slowly scrapping the breaker in a process expected to take many months.

"Am I sorry to see a facility like this and a piece of our industrial heritage go? I am," said Brian Rich, president of Reading Anthracite, which operates a surface mine behind the breaker. But "it's become a liability and eyesore to the community."

1906

Simpson & Watkins

In the August 24, 1886 issue of the *Carbondale Leader*, we read the following about Simpson & Watkins:

"Simpson & Watkins attend to the local interests of the Grassey Island, Edgerton and North-West collieries. The first of these is located at Peckville, some eight miles north of Scranton, on the Delaware and Hudson Railroad; it has an output of 800 tons of anthracite per day. The vein is twelve feet in thickness, and 400 men are employed." (from New York *Coal Trade Journal*, as reported in the *Carbondale Leader* of August 24, 1886, p. 4)

1907

Spring Hill Coal Company

The article given below titled "Spring Hill Coal Company" is dated December 24, 1906. It is included in one of the Gritman scrapbooks in the collection of the Carbondale Historical Society.

"SPRING HILL COAL COMPANY / Local Men Interested in New Coal Operations at Archbald. / The charter of the Spring Hill Coal company has been granted by the state department at Harrisburg. This is a company composed of upper valley residents, and the coal tract which is being developed is located on the mountain north of Archbald. / The capital stock of the company is 6,000 [sic] The incorporators are John W. Whyte, Carbondale, who has been a superintendent of the Temple Coal and Iron company for a number of years; Russell Osborne, Peckville; Edward A. Fellows, Jermyn. Each of them holds thirteen shares, valued at \$100 per share. / The company has been engaged in mining operations for several weeks. It has a lease on the tract of the John P. Farnham estate in the northern end of the borough, which contains a large area of marketable coal. The company is already doing an extensive local business, and it finds a ready market for its product." (clipping in Gritman scrapbook, dated December 24, 1906)

1908

Sterrick Creek Colliery

The Sterrick Creek Colliery is listed in the 1898 First District mine report It was operated by the Sterrick Creek Coal Company.

1909

Stillwater Colliery

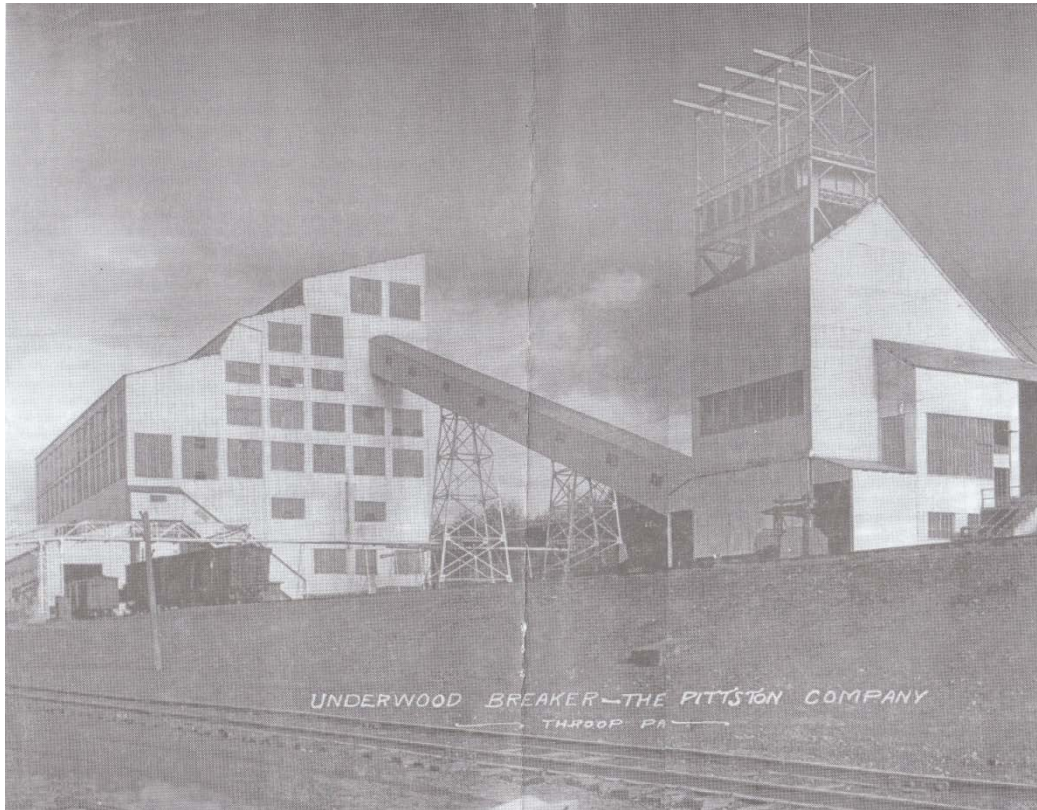
See Mark C. Walsh's *Collieries Along the Trails A Report to the Rail-Trail Council of Northeast Pennsylvania*, Part I, June 28, 2010, p. 24 for a list of persons who were killed while working at Stillwater Colliery.

Operators of this colliery: Stillwater Coal, J. W. Kirby, Clifford Coal, Hudson Coal Co. (after 1932).

To deliver 'buckets' of coal to the D&H line, the Hudson Coal Co. built an 1880-foot aerial tramway from the colliery, over the O&W, over the Lackawanna River, to an unloading point on the D&H. Once on the D&H, the coal was taken to the Powderly Colliery in Carbondale for further processing. Total output, 956,600 tons.

1910

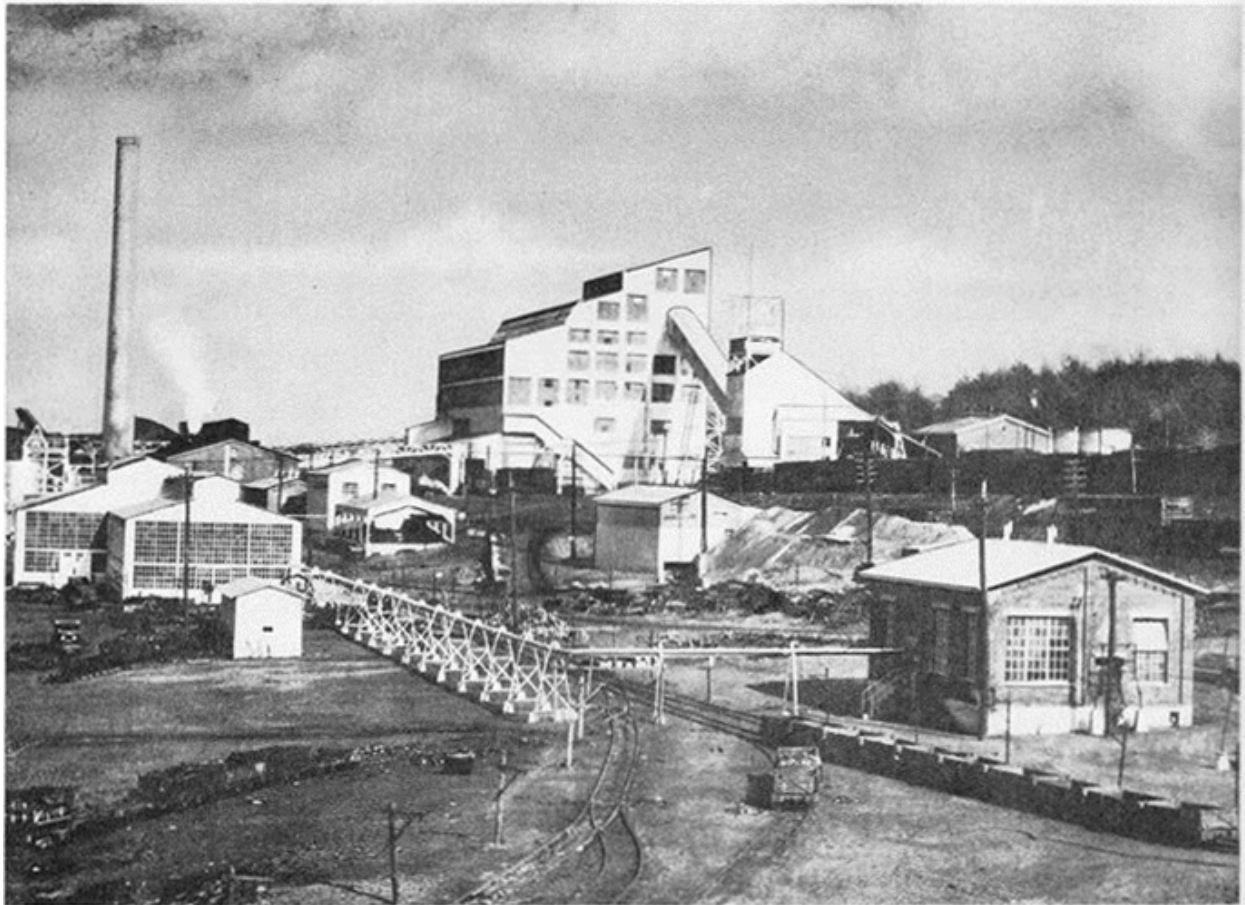
Underwood Colliery



Underwood Breaker – The Pittston Company, Throop, PA

The photograph of the Underwood Breaker that is given below is from *The Pennsylvania Story. Pennsylvania Coal Company, Dunmore, Pennsylvania*, a 30-page commemorative booklet produced by the Pennsylvania Coal Company (pages not numbered, date of publication not given, but from internal evidence in the booklet we can deduce that it was produced in 1948 or later). A copy of this booklet was made available to the Carbondale D&H Transportation Museum on June 21, 2016 by John V. Buberniak.

The Pennsylvania Coal Company's Underwood Colliery, Olyphant, PA. The building of this colliery started in 1910, and production was started on April 28, 1914.



Underwood Colliery in the Borough of Olyphant near Scranton, Pennsylvania. The building of this plant started in 1910 and production started on April 28, 1914.

1911

Von Storch Colliery

The von Storch family:

There are biographical portraits of many members of the von Storch family in Lackawanna County histories. As we begin our look at the Von Storch colliery, it would be well to have a look at those portraits.

The founder of the von Storch family in America was Heinrich Ludvig Christopher von Storch. Given below are biographical portraits of Heinrich L. C. von Storch and four of his sons two of his grandsons.

Heinrich Ludvig Christopher von Storch:

1. Ferdinand von Storch
 - A. Corrington von Storch
 - B. Robert von Storch
2. Theodore Von Storch
3. William von Storch
4. Justus von Storch

The founder of the von Storch family in America was Heinrich Ludvig Christopher von Storch, who first burned coal in Scranton in 1812, and who acquired 300 acres of land in Providence. Here is the biographical portrait of the man that is given in *PABRLC*, pp.250-252:

“Heinrich L. C. von Storch. One of the most prominent of the pioneers of Scranton was Heinrich Ludvig Chistopher von Storch, the founder of the family in America. He was born in Lohman, Mechlenburg-Schwerin, April 29, 1770. In 1794, with the family of G. N. Lutyen, he sailed for America, landing in Philadelphia. Following an unsuccessful venture in the fur trade, von Storch and Lutyen came to Lackawanna County and settled in Blakely. A year later, von Storch went back to Philadelphia and, thanks to his ability to speak both English and German, secured an excellent clerkship. With funds now available for investing, von Storch returned to Lackawanna County and acquired 300 acres of land, the old von Storch farm in Providence. On March 3, 1810 he married Hannah Searle. [Her brother Corrington Searle, was a civil engineer and surveyor, and it was he who surveyed the state of Ohio into counties and townships; later he was chief justice of the supreme court of Ohio.] They were the parents of 7 sons and one daughter. Heinrich L. C. von Storch died April 10, 1826.” (*PABRLC*, pp.250-52)

Harold Lewis, the *Scrantonian* Librarian, noted in 1978, that coal was first burned in Scranton in 1812 by H. C. L. von Storch. He said:

“Coal was first burned in Scranton in 1812, by H. C. L. Von Storch [Henry L. C. von Storch], of Providence.” (“Indians Alerted Whites of Coal,” by Harold Lewis, *Scrantonian* Librarian, September 10, 1978, p. 2A)

Hollister gives the year as “about 1818” when H. L. C. von Storch ignited the first coal ever burned in Scranton. In his unpublished manuscript, p. 11, he says:

"The most prominent outcropping of coal seen on the Lackawanna seventy-five years ago [from the perspective of 1880] was near the residence of Mr. Von Storch, of Providence. About the year 1818 Mr. Von Storch, an honest German, who had emigrated from Hamburg while Germany was agitated with the schemes of Napoleon, ignited a coal fire in his house." (*Hollister*, unpublished typescript, p. 11)

Whether it was in 1812 or about 1818, it was Heinrich L.C. von Storch who ignited that first coal fire in Scranton.

One of Heinrich L. C. von Storch's sons was Ferdinand von Storch, who was born in a log cabin in Providence on December 4, 1810. It was he who organized the von Storch Coal Company, which sank the shaft later owned by the Delaware & Hudson Canal Company.

Ferdinand von Storch. Born, December 4, 1810, in Providence. Following the death of his father, H. L. C. von Storch, his son Ferdinand, then age 15, assumed the responsibility of caring for his mother and his six siblings. On January 17, 1833, Ferdinand married Caroline Slocum. They were the parents of 9 boys and 3 girls.

In PABRLC, pp. 984-87, we read the following about Ferdinand von Storch:

"In 1855 the von Storch Coal Company, of which he [Ferdinand] was the chief promoter, was organized and after having successfully founded this corporation and leased his coal at an advantageous figure for those times, his health having become seriously impaired, he retired from active business. His death occurred November 21, 1868 and his remains were finally laid at rest in the von Storch family burying ground, located on North Main Avenue, Providence, Scranton."

One of Ferdinand von Storch's sons was Corrington S. von Storch. For two years he was an engineer for the Delaware & Hudson Canal Company, and afterward had charge of the erection of breaker machinery.

Corrington S. von Storch, was born December 4, 1835, and was a grandson of Heinrich Ludvig Christopher von Storch. It was Corrington's father, Ferdinand (born December 4, 1810) who organized the von Storch Coal Company, which sank the shaft which was later owned by the D&H. Corrington had ten siblings who attained maturity. In March, 1865, following service in the Civil War, he returned to Providence.

"For two years Mr. von Storch was an engineer for the Delaware & Hudson Company and afterward had charge of the erection of breaker machinery. Failing health forced him to give up active work and he resigned his position in 1873, since which he has lived quietly at home, No. 1812 North Main Avenue." (*PABRLC*, pp. 357-58, photo, p. 356)

Here is the photograph of Corrington S. von Storch that is given on page 356 of *PABRLC*:



CORRINGTON S. VON STORCH.

Corrington S. Von Storch (*PABRLC*, pp. 357-58 + photo on p. 356), a grandson of Heinrich, was a lifelong resident of Scranton, having been born there on December 4, 1835. Corrington returned to Scranton in March, 1865, after a term of service in the Civil War, and for two years was an engineer for the Delaware & Hudson Company and afterward had charge of the erection of breaker machinery. Due to ill health, he resigned in 1873.

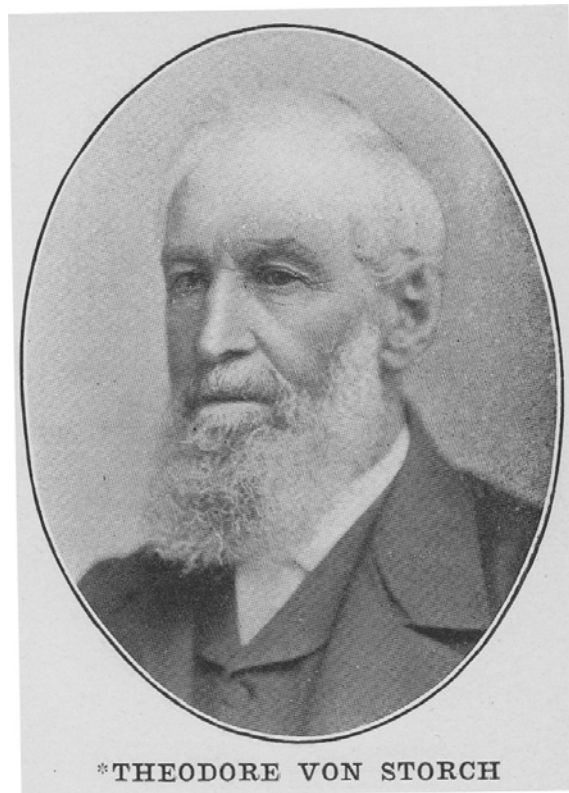
Another of Ferdinand von Storch's sons was **Robert von Storch**, who was born in Providence on November 1, 1844. Following service in the Civil War, he was honorably discharged in June 1865, and for the following two years he was with the Delaware & Hudson. In August, 1869, he became a brakeman for the Delaware & Hudson Canal company, between Scranton and Wilkesbarre. Afterward he was made fireman, and in 1870 became an engineer between Carbondale and Plymouth, later having other runs. In 1887 he retired from the railroad.

We read the following about Robert von Storch in *PABRLC*, p. 238:

"... the best citizens are those who strive to secure the welfare of their fellowmen. Robert von Storch possesses this family trait and in the city of Scranton is recognized as useful citizen. . . / At the age of 15, he became an employee of the Delaware & Hudson Canal Company, and later was with the Delaware, Lackawanna & Western as brakeman. After a term of service in the Civil War, he was honorably discharged in June, 1865. From that time until the spring of 1867, he was with the D&H. He then went to Colorado and worked in a mine near Denver for about one year. In August, 1869, he became a brakeman for the Delaware & Hudson Canal Company between Scranton and Wilkes-Barre. In 1870 he became an engineer between Carbondale and Plymouth. In 1887 he retired from the railroad."

Another of the sons of Heinrich L. C. von Storch was **Theodore von Storch**, about whom we read the following in Dwight J. Stoddard's *Prominent Men*, 1906 :

"Theodore Von Storch / Born Scranton, Pa., May 19, 1812--May 30, 1886. Educated Scranton, Pa. Married Josephine D. Barney, Oct. 21, 1863. Farmer. Coal Operator and Mine Owner." (Photo, p. 9, and biographical sketch, p. iii, in Dwight J. Stoddard's *Prominent Men*, 1906)



*THEODORE VON STORCH

We read the following about Theodore Von Storch in *Portrait and Biographical Record of Lackawanna County Pennsylvania*, 1897 (photo, p. 1014, biographical portrait, pp. 1015-1016):

"A son of Henry L. C. von Storch, the originator of the family in America, the subject of this sketch [Theodore von Storch, born May 19, 1812 in Providence] grew to manhood on the old homestead in Providence. . . For more than twenty years he held the office of justice of the peace and served as chief burgess of Providence nearly all the time it was under borough government. The land which he owned is underlaid with as fine coal deposits as may be found in the valley, and two companies operate it, the Delaware & Hudson Coal [sic] Company and the West Ridge Coal Company."

Theodore von Storch died May 30, 1886. Theodore von Storch and his wife, nee Josephine D. Barney, were the parents of two children: (1) a daughter, Helen Josephine, who was born March 20, 1866, and who married F. M. Vandling, the post master of Scranton, and (2) a son, Theodore Cramer, who was born October 26, 1864, and who graduated from Harvard University in 1887 with an A. B. and who studied law in Scranton and was admitted to the bar in 1891 and practiced law in Scranton. He also was president of the West Ridge Coal Company and secretary/treasurer of the von Storch Coal Company.

Another of the sons of Heinrich Ludvig Christopher von Storch was **William von Storch**, about whom we read the following in *Portrait and Biographical Record of Lackawanna County Pennsylvania*, 1897 (photo, p. 930, biographical portrait, pp. 931-32):

"He was born February 9, 1819, the son of Henry Ludvig Christopher von Storch. In 1841, he began to mine coal, some of which was shipped by wagon as far north as Syracuse and exchanged there for salt. In 1848 in connection with his brother Godfrey, our subject started a sash and blind factory, but after three years sold out. Later, with his brother, he built a saw mill on Leggett's Creek, and for almost fifteen years carried this on, manufacturing oak, hemlock and pine lumber. . . / In 1856, Mr. von Storch purchased one hundred and thirty-two acres, for which he paid \$300 an acre. . . / Laying out the property, he first sold lots, but later disposed of the entire surface, retaining the coal on lease. Since then the land has been built up, and is now almost entirely occupied, within its limits being included the finest part of Greenridge, toward Dunmore borough."

Here is the photograph of William von Storch that is given on page 930 of *PABRLC*:



WILLIAM VON STORCH.

Justus von Storch was the youngest son of Heinrich L. C. von Storch. About Justus von Storch, we read the following in *PABRLC* (pp. 455-56 + photo on p. 454):

"There is no family residing in Scranton that has furnished to the city better citizens or more successful business men than has the one of which the subject of this article was an honored member. He was the youngest son of Henry L. C. von Storch, the founder of the family in America. . . . At the family homestead in Providence, he was born April 15, 1824. . . / A lover of progress and good order, a friend to the worthy and unfortunate, an enemy to all schemes of fraud and dishonesty in public officials, seeking and working to improve the condition of mankind, to assist his community and promote its interests. He was well educated, cultivated in his tastes and a patron of the fine arts. Though richly endowed by nature, he deserved none the less honor that he improved the talents bestowed on him. Tolerant of the opinions of others, he

took the broad and comprehensive view of life which is thoroughly indicative of superior intellect and sound judgment. Quiet and retiring in disposition, he was nevertheless genial and affable in his intercourse with friends. He died October 28, 1890."

In Chapter XX (pp. 160-164) of Hollister's unpublished manuscript (c. 1880), titled "THE INTRODUCTION OF COAL BREAKERS INTO THE LACKAWANNA COAL FIELDS WITH THEIR DESTRUCTIVE FEATURES. VON STORCH BREAKER", Hollister identifies the Von Storch Breaker in Providence, erected in 1857, as the second breaker in the Northern Coal Field. In *Hollister*, pp. 160-164, we read the following about the first coal breaker in the Northern Coal Field:

"The false economy of breaking up coal by machinery, in the Northern Coal Field, began under the auspices of the Delaware and Lackawanna and Western Railroad Company at the Diamond Mines in Scranton in 1852. / The first Annual report of this Railroad Company[D&H] made January 1854 [emphasis added] says, 'that during the present year the steam power coal breaker at Diamond Mines (commenced in 1852) has been completed and put into operations. Additional screens and schutes and other apparatus for preparing the coal for use and loading it in cars, have been erected, the importance of which will be stated hereafter...' This wealthy and admirably managed Company own a thousand acres of coal land in the vicinity of Scranton upon which it is estimated there is over fifty million tons of excellent coal. / After this original coal breaker in this district went into operation in the fall of 1853, it turned out during the remainder of the year, 5,000 tons of prepared coal. / No steam coal breaker rose from the mines of the Delaware and Hudson Canal Company until a later date."

About the second breaker in the Northern Coal Field, the Von Storch Breaker, Hollister says the following:

"In 1855 the Von Storch lands lying in Providence, were leased by Messrs. Bowkley and Howard, of Pittston. They organized a Company in 1857 composed of Col. J. W. Johnson, Abell Bennett, B. F. Sawyer, John Howarth, C. Pierson, Ferdinand and G. and Justus Von Storch and others, sank the Van Storch Schaft by the aid of Captain John Martin, erected a coal breaker over it all [emphasis added] with the view of sending coal North and West by the Delaware, Lackawanna & Western Railroad."

In the period 1812-1815, we learn from *Hollister*, Maurice and William Wurts, before they acquired the land that they later purchased farther up the Lackawanna Valley in Carbondale, entertained the idea of purchasing these Von Storch lands in Providence from Henry L. C. Von Storch. In *Hollister*, we read:

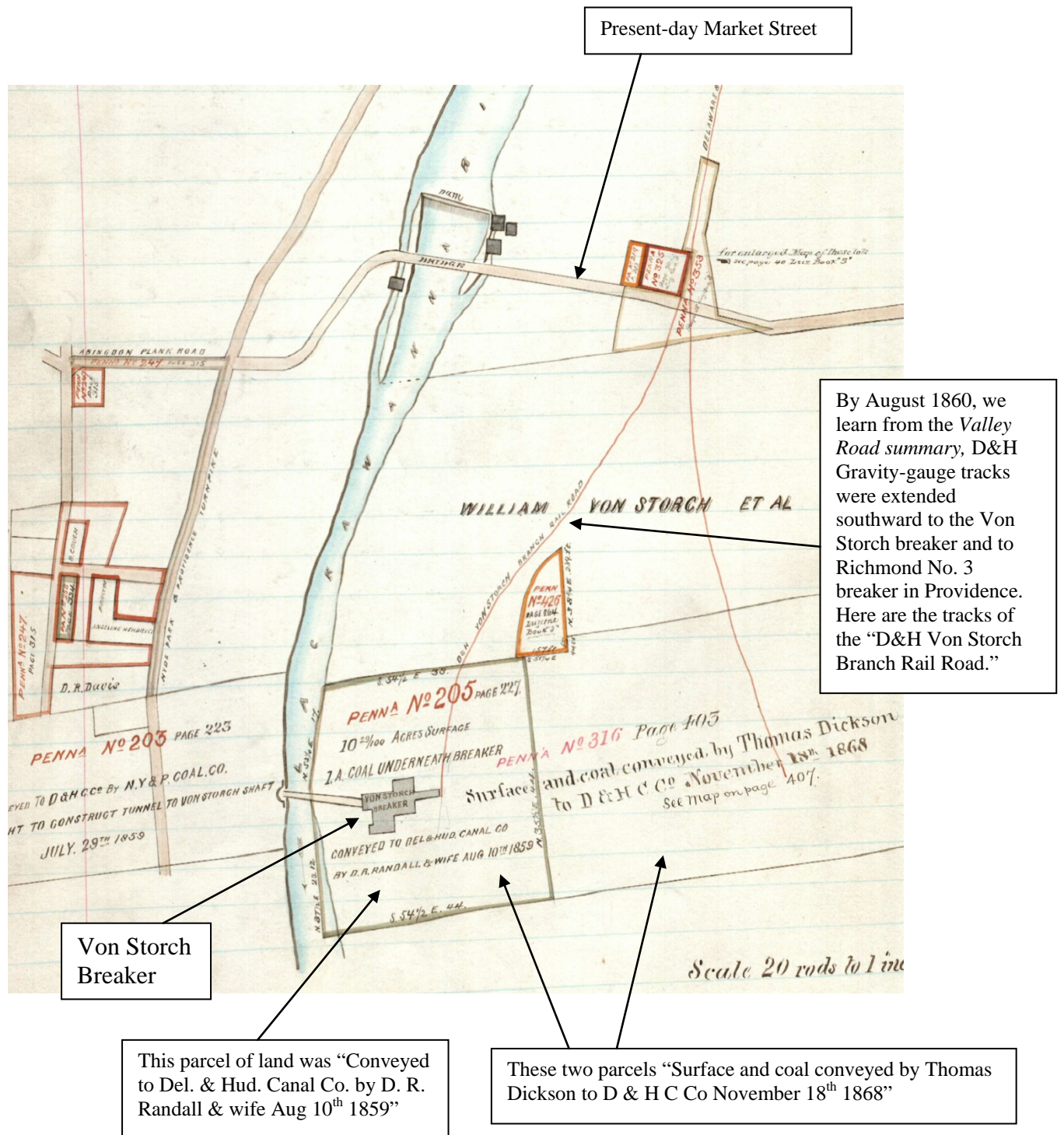
“These Von Storch lands were desired by Maurice and William Wurts, while exploring the Valley for coal before they had chosen the timbered site of Carbondale for mining it. Could these gentlemen in 1812-15 have purchased this rich tract from its owner Henry O. L. Von Storch [Henry L. C. Von Storch] as they aimed to do, opened mines, sought Cobb’s instead of Rixe’s Gap for an outlet, tenanted the unploughed acres by encouraging and developing a manufacturing town there would have been no Carbondale or Honesdale and the forests then standing upon their sites might yet have rung with the merry notes of wild turkeys and singing birds.”

Later in the nineteenth century, in 1859, (see map on the following page), when Thomas Dickson was “Superintendent of the gravity railroad and coal department,” these Von Storch lands in Providence (“the Von Storch coal lease with all improvements pertaining to it”) were purchased by the Delaware and Hudson Canal Company, and “the breaker removed from the shaft to the mouth of the slope on the Lackawanna half a mile from its original location soon afterwards and up until the Spring of 1874 contributed important tonnage to the Railroad and the Canal.” In 1874, the original breaker was taken down and replaced with a larger breaker. In *Hollister*, we read the following:

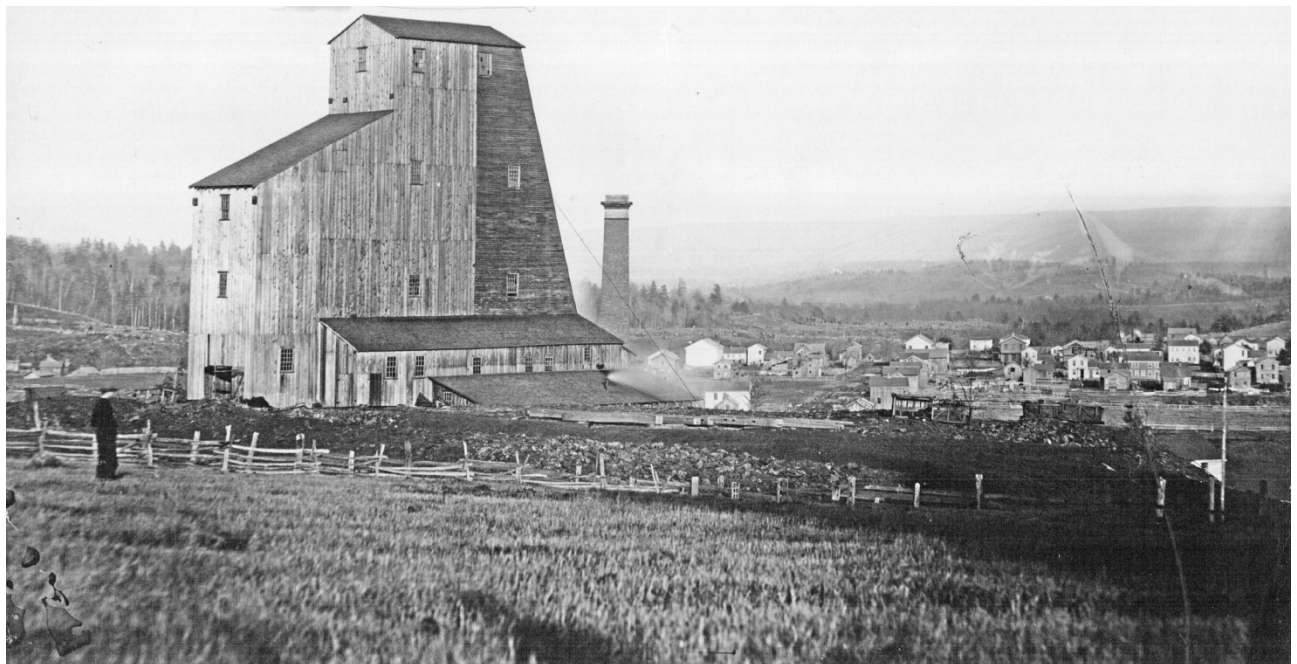
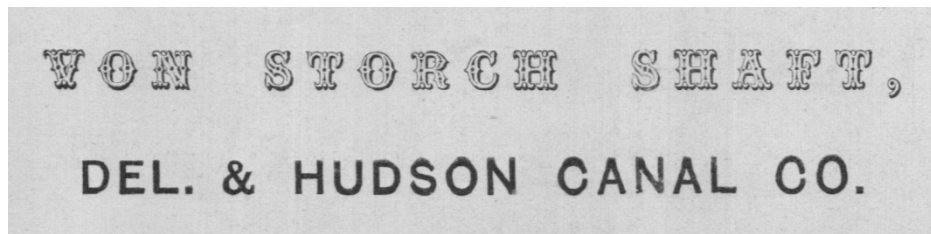
“Traditional pride in the judgment of Maurice and William Wurts in reference to these lands, with a correct perception of their value by Thomas Dickson then Superintendent of the gravity railroad and coal department influenced the Delaware and Hudson Canal Company to purchase the Von Storch coal lease with all improvements pertaining to it. The breaker was removed from the shaft to the mouth of the slope on the Lackawanna half a mile from its original location soon afterwards and up until the Spring of 1874 contributed important tonnage to the Railroad and the Canal. In 1874 this breaker worn out in masticating nearly 2,000,000 tons of coal left its Himmelah mark between Providence and Green Ridge as its monument then dissolved from view only to make room for a new one of greater capacity and greedier proportions. “

Those highly important property transactions are noted on the map on the following page. This map, in given in *D. & H. Deed Book – Luzerne* 2, p. 226. The map illustrates the deed, pp. 227-28, dated August 10, 1859, between David R. Randall and wife and the Delaware & Hudson Canal Company.

On that map, the Von Storch Breaker, and the D&H Von Storch Branch Rail Road are shown.



Given below is a copy of the original Johnson (Scranton, PA) photograph, 1860, of the von Storch Shaft that is in the archives of the Wayne County Historical Society.



In the August 11, 1860 issue of the *Carbondale Advance*, it was reported that mining had commenced at the von Storch shaft in Providence and at Richmond & Co.'s breaker in Providence. Here is that announcement:

“Our Coal Business. / We are told that mining has commenced at the Vonstorch Shaft in Providence, and at Richmond & Co.'s. Coal is daily forwarded here from both. . .” (*Carbondale Advance*, August 11, 1860, p. 2)

In the *Carbondale Advance* of June 24, 1871, it was reported that a large stone mortar, weighing 40 pounds and with a capacity of two quarts, was recently found near Capouse mound on the old Dr. Robinson farm by Ludwick Vonstorck. The mortar in question was the only perfect Indian mortar of the kind ever found in America, and it was turned over to Dr. Hollister, the owner of the best collection of Indian relics on the continent. Here is that article from the *Carbondale Advance*:

“The *Morning Republican* of to-day (Friday) says: / A large stone mortar weighing 40 pounds, with a capacity of two quarts, was found a few days since near Capouse mound on the old Dr. Robinson farm by Mr. Ludwick Vonstorck. It bears the marks of great labor and skillful workmanship outside and in, being worn smooth on its inner surface by the process of pounding corn. It is in the hands of Dr. Hollister, to whom it was presented by Vonstorck, and is well worth a visit because it is the only perfect Indian mortar of the kind ever found in the country. / The Dr. has undoubtedly the best collection of Indian relics on the continent.” (*Carbondale Advance*, June 24, 1871, p. 3)

Here is the Delaware and Hudson Canal Company section (p. 165) of Table No. 7 of the *1877 Mine Inspectors Reports*, in which precise data are reported on the collieries owned and operated by the D&H at that time.

Delaware and Hudson Canal Company

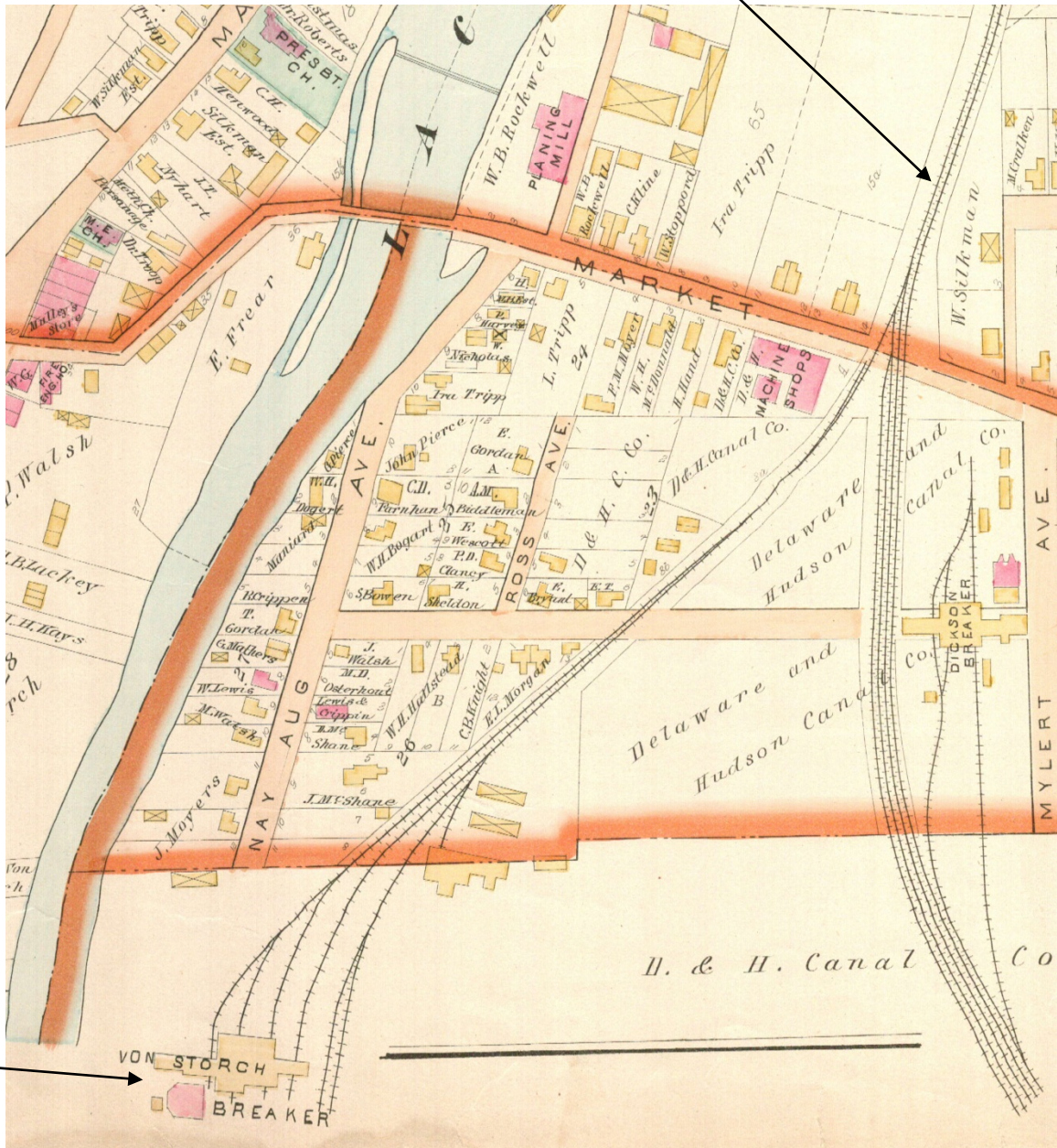
NAME OF COLLIERY.	SHAFTS.					SURFACE SLOPES.				UNDERGROUND SLOPES.				Total depth of mines in feet.	ELEVATION.		TOTAL OPEN'GS.			
	Number of.	Length in feet.	Width in feet.	Depth in feet.	Elevation of head ab. tide-water, in feet.	Number of.	Length in feet.	Vertical depth in feet.	Elevation of head ab. tide-water, in feet.	Number of.	Length in feet.	Vertical depth in feet.	Elevation of head ab. tide-water, in feet.		Of bottom above tide-water, in feet.	Of bottom below tide-water, in feet.	Shafts.	Slopes.	Drifts and tunnels.	Number of coal breakers.
Von Storch slope,	2	30	10	540	1,177	1	225	..	..	1	350	..	..	540	560	..	2	1	..	1
Leggett's Creek shaft,	2	24	10	340	789	..	..	..	..	1	300	15	449	355	434	..	2	..	..	1
Marvine shaft,	1	12	10	340	742	..	..	..	..	..	..	..	..	330	412	..	1	..	..	1
Eddy Creek shaft,	2	27	10	330	782	..	..	..	..	1	450	..	..	408	377	..	2	..	..	1
No. 1 and No. 2 colliery, Olyphant,* . . . . .	..	23	10	386	785	..	..	..	..	..	..	..	..	..	..	..	..	2	..	1
Grassy Island shaft,	2	14	10	170	879	..	..	..	..	2	500	..	..	..	..	..	2	..	..	1
White Oak colliery,	2	24	10	275	908	..	..	..	..	..	300	16	633	291	617	..	2	..	..	1
Powderly colliery,*	2	9	7	90	1,022	..	..	..	..	1	1,050	..	..	90	1,022	..	2	..	1	1
No. 1 shaft and W. B. tunnel,	1	11	11	89	998	1	450	65	998	..	..	..	..	80	900	..	1	1	1	1
No. 3 shaft,	2	24	9	70	1,022	..	..	..	..	..	..	..	..	70	952	..	2	..	..	1
Coal Brook colliery,	3	8	8	25	1,073	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Totals,	17	..	..	..	..	2	..	..	..	8	275	400	..	50	1,150	..	3	..	5	1

On September 22, 1882, T. C. von Storch, of Providence, we learn from the September 29, 1883 issue of the *Carbondale Advance*, left for Harvard University, where he will pursue a classical course. In that issue of the *Carbondale Advance*, we read:

“Mr. T. C. Von Storch, of Providence, left last Saturday for Harvard University, where he will pursue a classical course. The young gentleman enters under favorable circumstances, having won honors in his entrance examination. He was accompanied by his mother, Mrs. Theodore Von Storch, who will go from Boston for a short stay in Poughkeepsie, N. Y.—*Republican*.” (*Carbondale Advance*, September 29, 1883, p. 3)

The tracks leading from Market Street to the Von Storch Breaker in 1888 and shown in the detail given below from the *Atlas of the City of Scranton and Borough of Dunmore*, published by L. J. Richards & Co., Philadelphia, PA 1888.

Rail line between Providence and Olyphant. "During this year [1868], \$53,000 was expended in laying a third rail on the railroad between Providence and Olyphant. . ." , p. 229 *Century of Progress*



Detail of *Atlas of the City of Scranton and Borough of Dunmore*, published by L. J. Richards & Co., Philadelphia, PA 1888, showing von Storch Breaker

Charles W. Ziegler, the inventor of the Ziegler coal separator, which was used in 18 of the 21 D&H coal breakers in 1897, was the superintendent of the von Storch shaft of the Delaware & Hudson mines in 1897, having begun service there as superintendent in 1872. That we know from his portrait in *Portrait and Biographical Record of Lackawanna County Pennsylvania*, pp. 331-32. Therein, we read:

"The century soon to close has been an age of inventions in every line of human activity, and in this respect the coal industry has not been neglected. Among the useful inventions that are gaining recognition throughout the country may be mentioned the Ziegler coal separator, of which the subject of this article is the inventor and patentee [emphasis added], and which is especially valuable owing to the fact that it reduces the cost of the production of coal. The plan is the construction of a series of plates, with the necessary spaces for the slate to fall through, advantage being taken of the fact that the specific gravity of the slate is heavier than that of coal and also offers more resisting power. / At present superintendent of the von Storch shaft of the Delaware & Hudson mines, and for many years a resident of Scranton, Mr. Ziegler was born in Grossalmerode, Hesse-Nassau, Prussia, March 3, 1849."

In 1852, Charles Ziegler's father, Frank Ziegler, came to America and settled in Archbald, where he worked for the D&H, and later for the Pennsylvania Coal Company in Dunmore. He died in 1874. In 1854, two years after his arrival here, Frank Ziegler sent for his wife and children in Germany. His son Charles was between four and five years old at the time.

"At the age of nine, he began to work as a slate picker in the Spencer coal mines. In 1860 he became a slate picker in the Delaware & Hudson mines, operated by A. E. Albright, and when thirteen was made weighmaster, after which he gradually worked his way upward to a position of responsibility. Since 1872 he has been superintendent of the von Storch mines, having held the position longer than almost any superintendent in this locality."

Ziegler's coal separator/slate picker, in 1897, was used in 18 of the 21 D&H breakers, among others, in the anthracite coal fields:

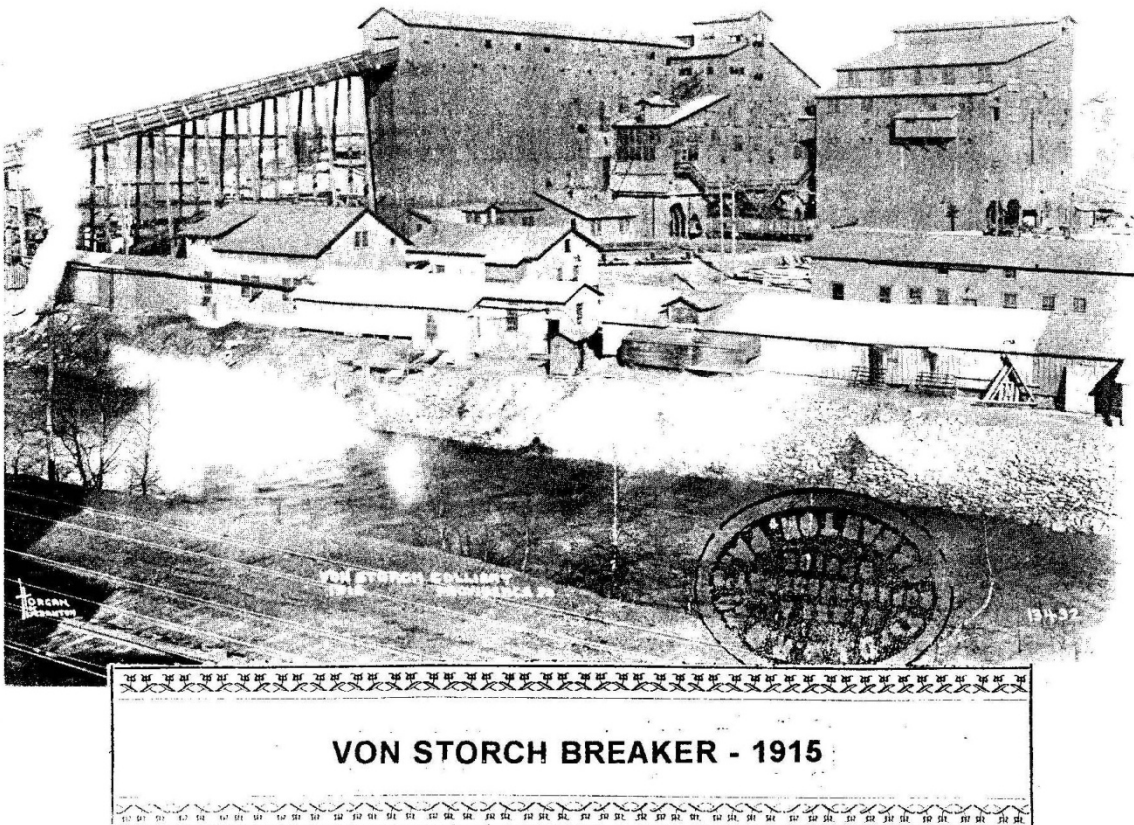
"In 1875 he devised his first coal separator, in 1883 got up another, and now has constructed a third. The slate picker of 1875, which has been in constant use since introduced by the Delaware & Hudson, was about the first successful one in the valley, and has been constantly made more valuable by added improvements. It is now used in eighteen out of the twenty-one breakers of the Delaware & Hudson, and other companies have also adopted it with success. In length it is thirty-five feet, and some breakers have from sixteen to twenty-two of them."

From an article in the January 14, 1898 issue of the *Carbondale Leader*, we learn that it was the considered opinion of Inspector Prytherich that many mine caves and squeezes that took place late in the nineteenth century, including “the recent Von Storch mine disaster,” were the result of the poor mining practices that characterized early mining in the anthracite fields. Here is that very interesting article:

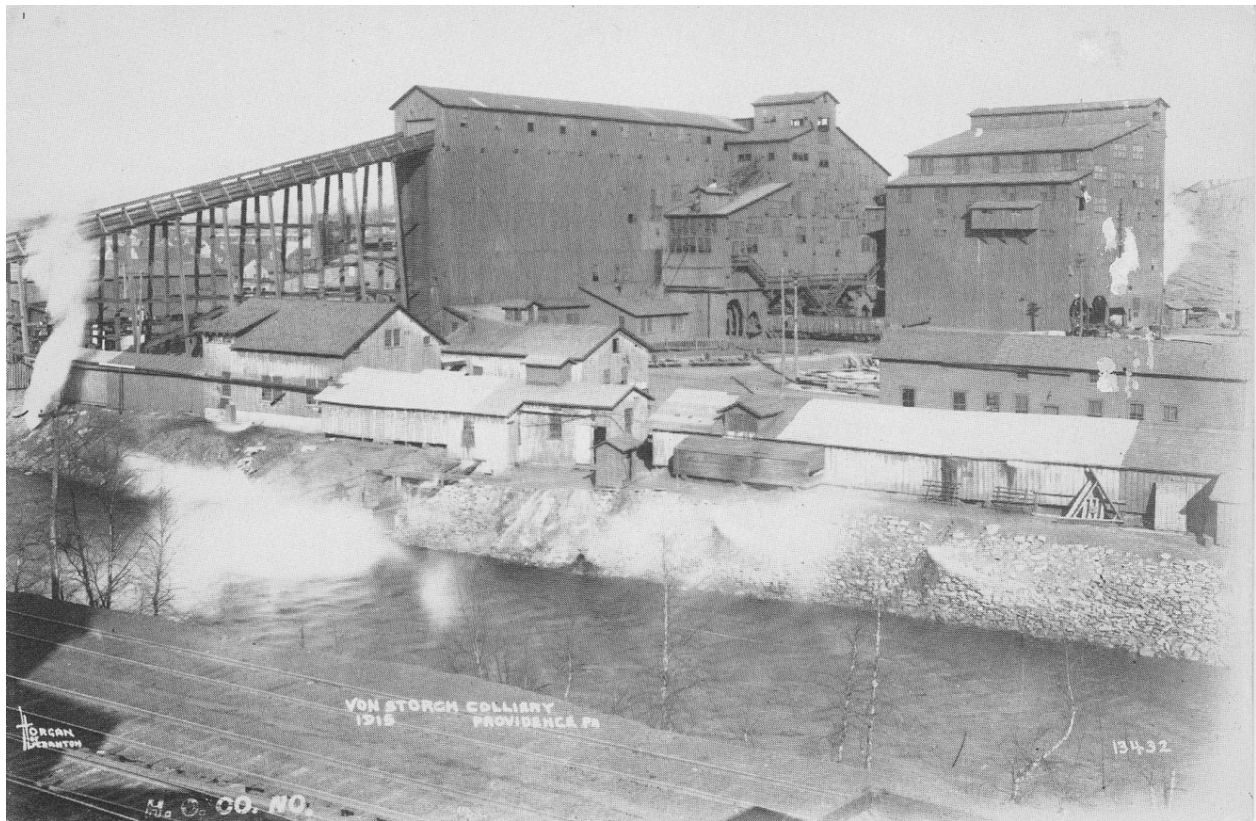
“ACCIDENTS IN THE MINES. / Inspector Prytherich Tells of Some Mistakes Which Have Caused Them in the Past. / When the annual report of Henry O. Prytherich for the year 1897 is published at Harrisburg the department of internal affairs will have a document of great value to them. This is the opinion of number of experienced men who have seen the report , says the *Republican*. / In it Mr. Prytherich has made a new departure in the manner of comments in an article of about 10 pages of legal, cap, closely written, he gives a vivid account of things which he believes to be responsible for the many caves and squeezes in the mines. / He says that in the early days of mining in this section only the most valuable coal was taken from the veins at first irrespective of its relation to other veins. When an order came for coal, or when it was necessary to open up a vein, they would open up that vein which would furnish the coal most suited for the market for which it was intended. / The drillers would bore for the coal, often passing through the vein nearest the surface and possibly down to a third vein, until the proper kind of coal, or the kind which would furnish the best return for mining was found, then that vein would be mined. / By doing this the lower veins were worked out first, leaving the pillars in that vein to support the earth, coal and rock above. / Finally, as the market opened and the demand for coal became greater, the other veins were opened, maybe the vein nearest the surface first and the next lower one afterward, or vice versa. Whichever one of the upper veins was opened first, if the lower one had been previously mined, the effect was the same. / **ROOFS BECAME LOOSENED.** / When the vein above the one already opened was being worked, the force of the many blasts fired would jar the roof of the vein underneath. By this process of continued disturbance the roof of the lower vein would become loosed in places and weakened. / Then the pillars would gradually wear away from various causes, the timbering which had been put up to sustain the roof would gradually wear out and become useless for the purpose intended. / Thus, by the process carried out for years, the roof would become loose and a big cave would be the result in the old workings. Then much treasure would have to be sacrificed and many lives jeopardized to repair it. The effects of a cave of any extension on the veins above can be readily understood. / Of this character the recent Von Storch mine disaster is supposed to be one. / Not only this is caused by this mistake in early mining, but large cracks and fissures are made in the roofs and sides of the veins. These form a receptacle for black damp and other dangerous gases which accumulate in large quantities only to explode and do much damage and cause loss of life, perhaps. / These causes seem to be plausible, and are no doubt responsible for the many accidents of this character that occur. The descriptions in the report are very complete and enter largely into detail. They give a clear idea of the condition of mining today, as they are controlled by circumstances due to these mistakes in the primeval days of coal mining in this valley.” (*Carbondale Leader*, January 14, 1898, p. 2)

At the time of the flood of the Lackawanna River in December 1907, seven hundred men and boys worked in the von Storch breaker.

Here is a Xerox copy of a photograph of the Von Storch Colliery in 1915 ("Von Storch Colliery 1915 Providence Pa" by Horgan of Scranton) that is given on page 124 of *Pioneer Neighborhood A History of Park Place and Bull's Head Scranton, Pennsylvania* by Nicholas E. Petula, 1996:



Here is the Horgan photograph that is given in the Petula book referenced on the preceding page:



Von Storch Colliery 1915 Providence, PA. Photo No. 13432 by Horgan, Scranton

The Von Storch breaker closed in May 1947.

There are two Von Storch mausoleums in the Dunmore Cemetery. Here are photographs of both of them that were taken by the author on October 11, 2009.

Von Storch mausoleums:



Von Storch Mausoleum, Dunmore Cemetery



Von Storch Mausoleum, Dunmore Cemetery

1912

West Mountain Coal Company

The West Mountain Coal Company was located on Route 107, Jermyn.

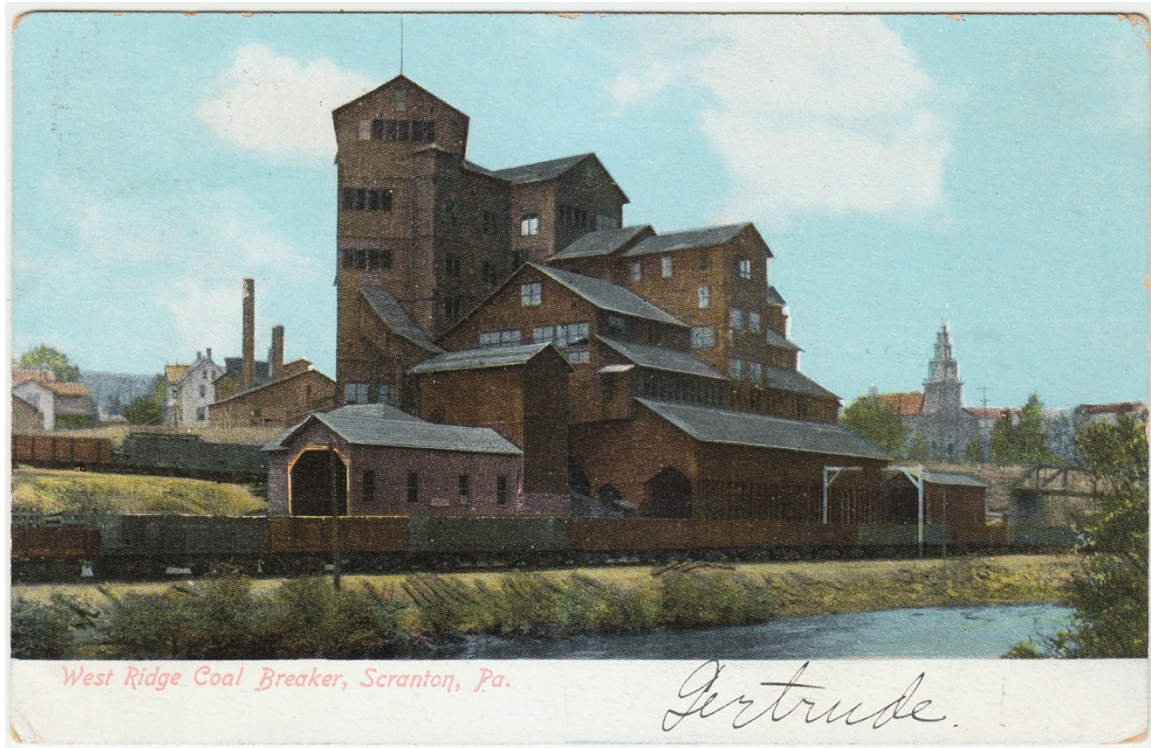
A photo post card reproduction of the West Mountain Coal Co., Route 107, was published and made available for purchase by the Jermyn Historical Society in 2008 (see article and photo on page 16 of the March 19, 2008 issue of *The Carbondale News*). Here is that post card:



1913

West Ridge Breaker

Here is a photo post card of the West Ridge Breaker that is in the collection of the Carbondale D&H Transportation Museum:



West Ridge Coal Breaker, Scranton, Pa.

On October 25, 2008, the author and Joseph Pascoe (Treasurer, Carbondale Historical Society) attended a performance of *Ghost and Other Scary Stories*, performed by the Hyde Park Players at The Century Club, Jefferson Street, Scranton. Following the performance there was a reception on the second floor of the building. At that time, the author discovered that in “the canasta room” (the front parlor on the second floor of the building) there is a large format oil painting on canvas by John Willard Raught titled *West Ridge Breaker*. From the plaque on the painting we learn that it was presented to The Century Club by John M. Robertson, Esq. The author spoke with the president of The Century Club about the painting and asked if he might have permission to take a photograph of the painting. She said that we could do so whenever the building was open. She also reported that there are two (possibly three) J. W. Raught oil paintings of breakers at the Lackawanna Historical Society (where she serves as a docent).

John Willard Raught (born 09-09-1857, Dunmore, PA—died January 1931; interred in Dunmore Cemetery) worked as a telegrapher for the Pennsylvania Gravity Railroad so that he could earn money to attend the National Academy of Design. He studied in New York and Paris. Around 1897, he began to paint society portraits in Scranton; also coal breakers. In 1911 he exhibited 12 paintings of coal breakers at the Robertson Art Rooms in Scranton's Connell Building. In 1915 he exhibited 64 pieces at The Century Club. There was a memorial exhibition of his works at the Everhart Museum in 1931; also in 1961 when about 100 of his works were shown there. It is known that he painted the Brisben breaker, the Pine Brook breaker, the Eddy Creek breaker, and possibly the old Ewen breaker in Pittston. A large oil painting on canvas of John Jermyn was painted by J. W. Raught in 1910. In 2010 the original painting was donated to the Jermyn Historical Society by descendants of John Jermyn.

Burton E. Kingsley was the superintendent of the West Ridge Coal Company in 1897, when *PABRLC* was published, and in which we find a portrait of the man (pp. 691-92). Kingsley's father, S. D. Kingsley, we learn from his son's portrait, was born in Montrose, PA, and at the age of 18 went to New London, CT, and learned the carpenter's trade. He then moved to Scranton.

We read there: "He [S. D. Kingsley] built his first coal breaker at Jessup, and afterward continued in that line, building almost all of the breakers used by the Delaware, Lackawanna & Western road."

Burton's brother George was the superintendent of O. S. Johnson's colliery at Priceburg. Burton was born in Blakely, August 8, 1860.

"In 1879, he became weighmaster for the Delaware & Hudson road at Olyphant, his home meantime being removed to Blakely. He continued as weighmaster at colliery No. 2 and Eddy Creek colliery until 1890, but in the latter year was made foreman at Eddy Creek. February 1, 1896, he accepted a position as superintendent of the West Ridge mine and has since had charge of the work in the colliery."

1914

White Oak Breaker

The White Oak Breaker, Archbald, was built circa 1859; it burned on July 14, 1899.

Here is the Delaware and Hudson Canal Company section (p. 165) of Table No. 7 of the 1877 *Mine Inspectors Reports*, in which precise data are reported on the collieries owned and operated by the D&H at that time.

Delaware and Hudson Canal Company

NAME OF COLLIERY.	SHAFTS.					SURFACE SLOPES.				UNDERGROUND SLOPES.				Total depth of mines in feet.	ELEVATION.		TOTAL OPEN'GS.			
	Number of.	Length in feet.	Width in feet.	Depth in feet.	Elevation of head ab. tide-water, in feet.	Number of.	Length in feet.	Vertical depth in feet.	Elevation of head ab. tide-water, in feet.	Number of.	Length in feet.	Vertical depth in feet.	Elevation of head ab. tide-water, in feet.		Of bottom above tide-water, in feet.	Of bottom below tide-water, in feet.	Shafts.	Slopes.	Drifts and tunnels.	Number of coal breakers.
Von Storch slope,	2	30	10	540	1,177	1	225	..	..	1	350	..	..	540	560	..	2	1	..	1
Leggett's Creek shaft,	2	24	10	340	789	..	..	..	..	1	300	15	449	355	434	..	2	..	..	1
Marvine shaft,	1	44	10	330	742	..	..	..	..	..	..	..	..	330	412	..	1	..	..	1
Eddy Creek shaft,	2	27	10	408	782	..	..	..	..	1	450	..	..	408	377	..	2	..	..	1
No. 1 and No. 2 colliery, Olyphant,* . . . . .	..	23	10	386	785	..	..	..	..	..	..	..	..	..	..	..	..	..	2	1
Grassy Island shaft,	2	14	10	170	879	..	..	..	..	2	500	16	633	291	617	..	2	..	..	1
White Oak colliery,	2	24	10	275	908	..	..	..	..	1	300	..	..	..	..	..	2	..	..	1
Powderly colliery,* . . . . .	..	7	7	30	1,022	..	..	..	..	..	1,050	..	..	90	1,022	..	2	..	1	1
No. 1 shaft and W. B. tunnel,	1	11	11	89	998	1	450	65	998	..	..	..	..	89	909	..	1	1	1	1
No. 3 shaft,	2	24	9	70	1,022	..	..	..	..	..	..	..	..	70	952	..	2	..	..	1
Coal Brook colliery,	3	10	8	25	1,073	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Totals,	17	..	..	..	..	2	..	..	..	8	..	..	..	..	..	..	17	2	9	10

On May 8, 1879, Frank Shuster, a mine at the White Oak Colliery, was killed instantly, through his own negligence, by a fall of coal. Here are the details on the accident as published in *Reports of the Inspectors of Mines*, 1879, pp. 189-90:

“Frank Shuster, a miner, at the White Oak Colliery, Delaware and Hudson Canal Company, Archbald borough, was instantly killed May 8, by a fall of coal. The chamber where this accident occurred was worked by Shuster and Frederick Miller, and was as safe a place to work in as one could wish. The roof was good and the chamber was well timbered. Shuster had just fired a blast in what is known as the ‘five feet bench,’ but the blast did not bring out the coal, and he hastened in with his pick, and commenced undermining it. In order to do this, he was obliged to go under what is called the ‘eighteen inch coal,’ which proved to be cut through by the blast to a smooth above it. He went under this without examining it, and, after mining for some time, he took his

drill and commenced barring out the coal, and in doing so drew down the 'eighteen inch' bench upon himself, which killed him instantly. I was informed by Frederick Miller, his partner, that he was in great haste to get home to work in his garden, but that he was usually a very careful man. However that may be, it is very evident that he lost his life entirely through his own negligence. He was of German nationality, thirty-two years of age, and left a widow with three small children."

On September 3, 1883, a team of horses attached to a light spring wagon passed by the White Oak breaker, Olyphant, with two men in the wagon. Several hours later, the same wagon re-appeared at the breaker but the men were not in the wagon. No one ever came forward to claim the wagon or the horses. Here is the article about this mysterious wagon that was published in the *Carbondale Advance* of September 8, 1883:

"On Monday night at 11 o'clock a team of horses attached to a light spring wagon passed by White Oak breaker, Olyphant. When seen by the watchman at that hour two men were in the wagon. The same team returned between two and three o'clock in the morning, but no men were in the wagon. A hat, rubber coat and horse blanket were all that the wagon contained. The watchman tied the horses to a fence and they stood there till 9 o'clock. The horses were then put into a barn and fed and at 7 o'clock in the evening no owner or claimant of horses and wagon had appeared." (*Carbondale Advance*, September 8, 1883, p. 3)

The White Oak Breaker, on the east side of Archbald, not far from the Delaware & Hudson station, burned on July 14, 1899. The original breaker was built in 1859. At the time of the fire, 500 men and boys worked in the breaker. Here is the article on the fire that was published in the *Carbondale Leader* of July 15, 1899:

"ARCHBALD'S GREAT LOSS. / The White Oak Breaker Totally Destroyed by Fire—Five Hundred Employes Out of Work. / The White Oak Breaker at Archbald, which was owned and operated by the Delaware and Hudson company, was entirely destroyed by fire last night. / It is supposed that a spark from a locomotive on the Delaware and Hudson railroad, which runs close to the breaker, was the cause of the fire. / Flames were first discovered in the new annex to the breaker about 8:45 o'clock and spread with lightning like rapidity. In a few minutes it was apparent that the building was doomed to destruction. / The Archbald fire companies were quickly on the scene and did magnificent work in saving adjoining property. The breaker and boiler house were entirely destroyed, but the weigh office, powder house and the shops about the breaker were saved. There were dwellings within fifty feet of the breaker and these, too, were saved from injury through the efforts of the fire-fighting force. / **BUILT YEARS AGO. /** The original White Oak breaker was built forty years ago, but has been overhauled

several times and within a year was enlarged and remodelled and made one of the best breakers in the valley. It was valued at no less than \$60,000. / The breaker occupied a position on the east side of Archbald, not far from the Delaware & Hudson station, and furnished employment to over 500 men and boys. / It was shut down for upwards of a week for repairs and had only resumed operations yesterday morning. / Delaware and Hudson officials could not say last night whether or not the breaker will be rebuilt. The coal that supplied the breaker was taken from a drift in the hillside nearby. / At Archbald the impression prevails that the breaker will not be rebuilt on the old site but will be located somewhere in the borough. / ASSISTANCE ASKED. / In the early career of the fire it was feared that the flames would communicate with nearby buildings and assistance was asked from the fire companies of Jermyn. The Crystal and Artesian companies of that place promptly responded. / The borough building, St. Thomas Catholic church and many of the best buildings of the borough were within a short distance of the breaker which was destroyed but all escaped without injury.” (*Carbondale Leader*, July 15, 1899, p. 6)

1915

Williams Coal Mine and Breaker

The Williams Coal mine and breaker were on Elk Creek in Fell Township.

The following data on the Williams coal mine and breaker are given in *1880*, p. 476:

"The Williams coal mine, on Elk Creek [in Fell Township], was opened in December 1864, by J. W. and J. P. Williams, and the breaker was built in 1874. It has a capacity of 100 tons per day. It is run only through the winter and averages about 1,500 tons. There is one sixty horse power engine and six men are employed. John W. Williams is the superintendent. A saw-mill connected with this breaker was built in 1874, with a capacity of 10,000 feet of lumber per day." (1880, p. 476)

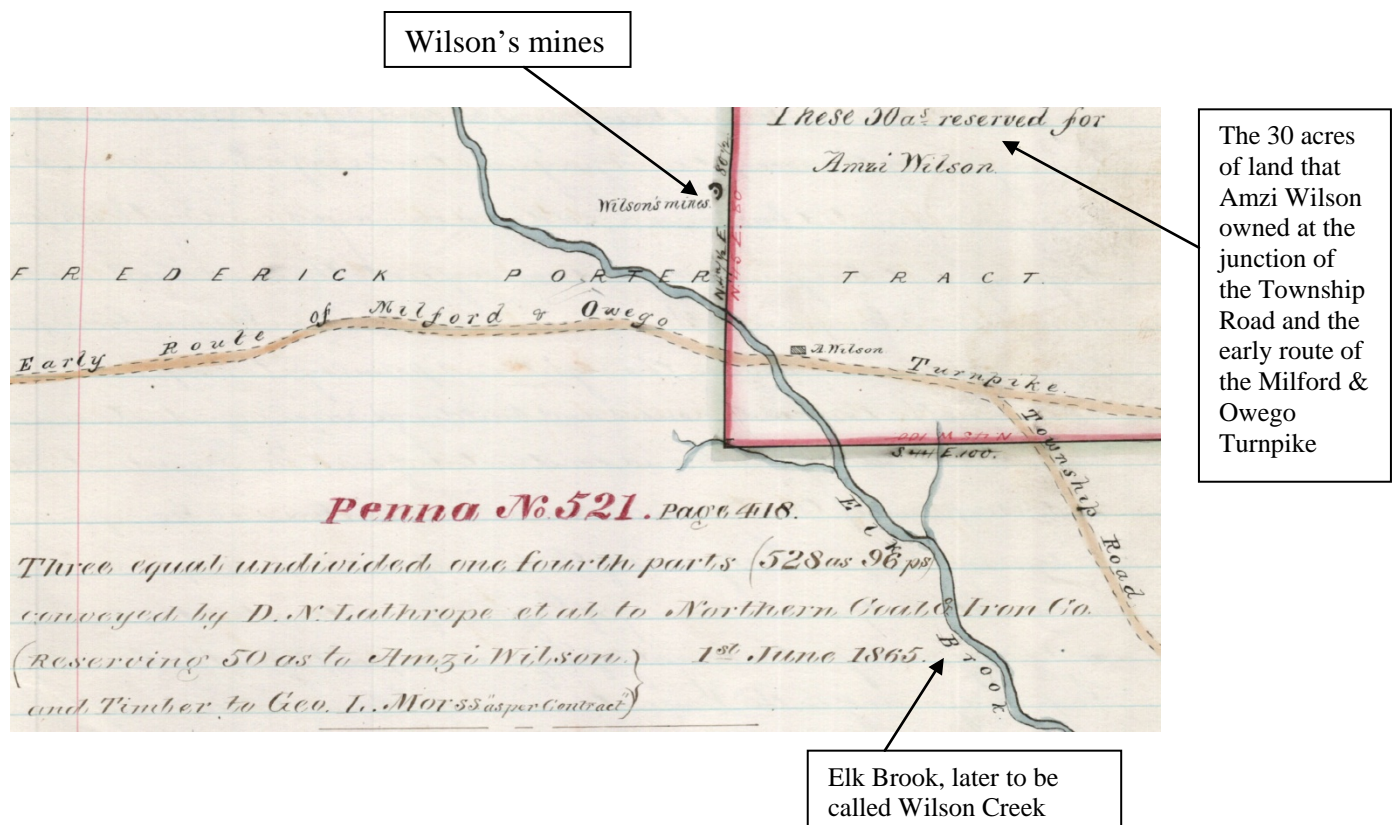
In *Hitchcock*, Volume II, p. 338, we read the following about the Williams coal mine operations:

"In 1864 the Williams coal mine on Elk creek was opened, and later the mines of the Delaware & Hudson Coal Company, around which sprang up the village of Vandling, about one quarter of a mile from the Wayne county line, five miles north of Carbondale and one mile south of Forest City, amid the hills at the foot of the Moosic mountains." (Hitchcock, Volume II, p. 338)

1916

Wilson Creek Colliery

Wilson's Mines are shown on the map given below from *D&H Deeds Luzerne I*, p. 37; deed, p. 34-36. dated January 22, 1844, between Joseph R. Priestly Atty in fact to The Delaware & Hudson Canal Company. Note that the Elk Brook flows down through this area, passing in front of the building marked "A Wilson" on the early route of the Milford & Owego Turnpike. The note on the map in the upper right corner reads: "These 30a's [acres] reserved for Amzi Wilson."



From *Reports of the Inspectors of Mines*, 1887: p. 18, we learn that Anthony Scott was in a non-fatal accident at the Wilson Creek Colliery on October 28, 1887:

“October 28, Anthony Scott, age 60, working at the Wilson Creek Colliery, D. & H. C. Co., Fell Township, Lackawanna County, was in a non-fatal accident (slightly injured on body and heel by cars).

On April 21, 1899, Thomas Allen, a miner, was killed instantly by a fall of coal at the Wilson Creek mine. His laborer, Peter Foxe, helped to shovel away the debris that covered the lifeless body of his partner, Thomas Allen. Here is the report on the accident that was published in the *Carbondale Leader* of April 22, 1899:

"THOMAS ALLEN KILLED. / Met Death in the Wilson Creek Mine Yesterday. / Thomas Allen, a miner employed at the Wilson Creek mine had his life crushed out yesterday between the hours of eleven and twelve by a fall of rock. Mr. Allen and laborer Peter Foxe were working

together just before the fall came. Mr. Foxe left for another part of the mine and before had gone twenty yards the crash came. He immediately secured help and rushed back to the fall where after shoveling away the debris the lifeless body of Mr. Allen was found. As no cry was heard when the crash came it is supposed that the man was killed instantly. / It was ascertained that his neck had been broken. Thomas Allen was the son of John Allen and had been a life long resident of this city. He was thirty-six years of age and is survived by a wife." (*Carbondale Leader*, April 22, 1899, p. 2)

In the late nineteenth century, it was believed by some that the coal as yet un-mined in the Wilson Creek area was running out. Andrew Nicol, and others, believed otherwise. They were right. In the *Carbondale Leader* of June 2, 1899, we read:

" . . . At the Wilson Creek colliery a new inside plane is to be constructed to do away with another needed opening. The additional air motor recently received is greatly facilitating the work at that point. / The many and big changes should put at rest for years the story that the coal around Carbondale is nearly exhausted. The company officials show by their actions that they know there are immense beds near here that have not been touched. It is confidently asserted by some old and experienced miners that there is still as much below the surface as has been mined. In conversation with one of these recently he informed a *Leader* man that their [sic] need be no fear of a famine in this line for many years to come. / 'This scare story has been going the rounds ever since I can remember' he said. 'Shortly before the death of the late superintendent Andrew Nicol, I with others was talking to him concerning the coal in the Wilson Creek mine. Some one expressed the belief that it would not last much longer. A little child was passing at the time and Mr. Nicol pointing to the lad said 'when that boy is an old, gray haired man they will still be taking coal from the Wilson Creek bed.' That prophecy will certainly come true as it was given out fully ten years ago and more mining is done there today than was done at that time.'" ("More Changes in the D. & H.," *Carbondale Leader*, June 2, 1899, p. 5)

On August 24, 1899, the driver boys at the Wilson Creek Colliery went out on strike because the mine owners would not re-instate the former wages for drivers there (\$1.38 per day). In the *Carbondale Leader* of August 24, 1899, we read:

"DRIVER BOYS OUT ON STRIKE. / Those at the Wilson Creek Colliery Asked for a Resumption of Their Former Wages. / Labor troubles are spreading. Following the demand for redress of grievances made by the employes at the Franklin colliery comes news of discontent among the driver boys in the Wilson Creek mines of the Delaware and Hudson company. There are a number of openings to be included in the Wilson Creek colliery and extensive operations are carried on there. Although the introduction of air motors did away with a number of the

driver boys employed, there is still a large number required and they today decided to go out on strike. / The trouble has been brewing for some time. Its inception was in a reduction of wages made by the company last spring. At that time the drivers who had been receiving \$1.38 per day were reduced to \$1.25 and the wages of the other classes of drivers were reduced proportionately. / Demands have been made recently upon the bosses for a re-establishment of the old scale. The matter was laid before the company officials it is said and an answer received that it would be impossible to comply with the demand. The drivers therefore went on strike today and in consequence the mine is practically idle throwing a large number of men out of work." (*Carbondale Leader*, August 24, 1899, p. 5)

1917

Winton Colliery

In Hitchcock, Volume II, p. 346, we read the following about Winton:

"Lying between Archbald on the north and Olyphant on the south, its boundary line extending northwest and southeast with the Lackawanna river as its western boundary, is the borough of Winton. Curiously enough, Winton borough is not in Winton town, but Jessup, the village of Winton in the northern part of the borough being but a mining hamlet of perhaps forty homes, built around a colliery. Jessup, in the southern part, lying along the Lackawanna, is the real business section of the borough, its banking point and railroad station. . . Prior to 1848, Judge L. S. Watres, of Scranton, had a saw-mill at Winton, which was then known as Mt. Vernon."

The Winton Coal Company was organized by Byron M. Winton, who was its treasurer and general manager. About the man, we read the following in *PABRLC*, pp. 916-17.

"BYRON M. WINTON. The birth of our subject occurred June 23, 1847, in Providence, where he was reared and obtained his early education. . . / After assisting his father in business for a time, in 1868 he embarked in the wholesale grocery trade at No. 107 Franklin Avenue, where he carried on business for fourteen years, and on disposing of his stock organized the Winton Coal Company, of which he has since been treasurer and general manager. He is also treasurer of the Mt. Vernon Coal Company, executor of the Catharine Winton estate and director of the Winton Water Company, which has large reservoirs that supply water to the towns of Winton, Olyphant and Dickson City." *PABRLC*, pp. 916-17.

The Winton Breaker, which was established by William W. Winton, began operations on July 9, 1874.

Here is the photograph of William W. Winton that is given in Dwight J. Stoddard's *Prominent Men*, 1906, p.. 27:



Here is the biographical sketch of W. W. Winton that is given on p. vii, in Dwight J. Stoddard's *Prominent Men*, 1906:

"William W. Winton / Born Butternuts, Otsego County, N. Y., January 29, 1815--1894. Married Catharine Heermans, Dec. 31, 1835. Banking and Real Estate. Coal Operator Highly successful career as a teacher and merchant. About 1858, at Providence, he became interested in coal operations and banking. He established a private banking house in Scranton on Penn Avenue, which became the Second National Bank, of which Winton was for many years president. In 1865 he organized the First National Bank of Providence and ultimately consolidated it with the Second National Bank of Scranton. He became a director of the People's Street Railway Company. He was the founder of the Presbyterian Church of Providence, and gave the lot for the church building. He became a lessor to the Oak Hill Coal Company, also to the Green Ridge Colliery. He was a lessor to the D&H of 440 acres of land in the warrantee name of David Brown in the township of Blakely, and part owner of the adjacent tracts of land where the new and enterprising village bearing his name is located. The branch railroad of the DL&W running

to this new village is named after him. He had erected on the square at Providence, at a cost of more than \$1,000, an elegant drinking fountain for man and beast.”

About 1858, William W. Winton became interested in banking, and established a private banking house in Scranton on Penn Avenue, which became the Second National Bank, of which Winton was for many years president. Given here is a photograph by Schurch of the Second National Bank of Scranton from *Clark*, facing page 192:



SECOND NATIONAL BANK OF SCRANTON.

The Winton Breaker opened on July 9. 1874. Published in *Clark*, pp. 191-192, there is an extensive article on the opening of that breaker. Here is that article:

“The thrifty village of Winton owes its origin entirely to its founder of that name. Its existence may be said to have been begun by the opening of the Winton Breaker, which occurred July 9th, 1874. Space is given to these details in order that people outside of the coal regions may learn how a coal village is ushered into rank with neighboring towns. / About one hundred and fifty ladies and gentlemen assembled and embarked on the train over the Delaware and Hudson Road to Winton, there to witness the formal opening of the new breaker which has just been constructed at that point. The party, among which were several of the most prominent business men of Scranton, together with a large number of gentlemen directly interested in the coal departments of the Lackawanna Valley, was in the best of spirits, and was augmented by reinforcements at all stations along the line. Among those present were: W. R. Storrs, R. Manville, George L. Dickson, W. B. Culver, Dr. Hollister, W. W. Winton, A. Mulley, E. Dolph, E. A. Coray, Hon. Lewis Pughe, R. W. Luce, Walter W. Winton, Rev. A. Barker, Rev. A. A. Marple, Dr. Bedford, J. T. Fellows, Isaac Dean, A. J. Norrman, James Slocum, George Griffin, James Archbald, O. P. Clark, Joseph Gunster, Ziba Knapp, W. O. Silkman, Mr. Filer, Mr. Livy, R. H. McKune, A. H. Winton, George Coray, Judge Merrifield, S. M. Nash, J. F. Snyder, J. Post, R. B. Brockway, C. E. Judson, Dr. Gardner, George Breck, J. Barrowman, L. S. Fuller, John Zeidler, John B. Collings, Sidney Broadbent, H. K. Grant, J. Raymond, J. Jones, Mrs. W. W. Winton, Mrs. Nash, Mrs. Silkman, Mrs. O. P. Clark, Mrs. R. W. Luce, Mrs. A. H. Winton, Mrs. R. W. Winton, Mrs. L. Gaff, Mrs. Weston, Mrs. Pierce, Mrs. Filer, the Misses Dean, Filer, and many others. / Arrived at Winton the excursionists were conducted to the new breaker, headed by the Dunmore citizens’ band, which discoursed several patriotic and enlivening airs. The Winton breaker is situated a short distance from the Delaware and Hudson track, on a gentle declivity to the left bank of the Lackawanna River, and commanding a splendid view of the romantic scenery stretching north and south. It is separated by a charming intervalle, from ridges of undulating hills, rising behind each other in succession, and adorned with the primeval pines beneath whose friendly shades the dusky children of the forest often reclined before the foot of the pale-face pressed the emerald banks of the gurgling river. Through this delightful intervalle the Lackawanna flows, fertilizing the country in its course, and receiving the numerous sparkling and tiny tributaries that run laughingly from their mountain sources to lose their individuality in the bosom of the murky stream. To the right and left of the river a few shattered and deserted homesteads stand, where in other day, peace and plenty were enjoyed amid the mountain solitude. The locality was then known as Mount Vernon. / Experienced men, whose opinions on coal matters were not to be gainsayed, condemned the coal resources of Mount Vernon; its business interests languished; its homesteads, one by one became deserted, and it could find no purchaser until the year 1870, when the entire tract of land, comprising some 425 acres, was purchased by Messrs. Winton, Dolph & Company, for \$31,000. An adjoining tract of 420 acres, was purchased by the same party. It history since then, the construction of the Winton branch of

the D. L. & W. Railroad, the changing of the name from Mount Vernon to Winton, are matters too well known to need recapitulation. It may be well, however, to state that Messrs. Filer and Livey, who have been instrumental in the erection of the new breaker, have leased the coal for thirty-six years from Winton, Dolph & Co. [emphasis added] / After the excursionists had thoroughly inspected every intricate piece of machinery, explored every chute and pocket, and ascended every stairway leading to the main landing it was well nigh noon, and the commissary department, which was amply cared for, was called into requisition. The good things were hoisted on a car up the slope to the landing and arranged on large tables, which were admirably presided over by Mrs. W. W. Winton, Mrs. J. Livey, Mrs. B. M. Winton and Mrs. A. H. Winton. While partaking of lunch, a car filled with dusky diamonds was hoisted up and dumped into the chute. This was the first ever introduced to the breaker, and it was necessary to commemorate the event with an appropriate address, the Rev. Abel Barker, of Wyoming being called upon to make some remarks. He was followed by other speakers, and the day was finished by music and dancing.”

Here is the photograph of W. W. Winton by Schurch that is given facing page 189 of *Clark*:



William W. Winton. Photograph by Schurch.

On September 1, 1882, Lewis S. Waters, Alderman of the Ninth ward of the city of Scranton, died, at the age of 75. He was widely regarded as one of the pioneers of the Lackawanna Valley. In 1837, he located in Mount Vernon, known in 1882 as Winton, where he expended considerable money in the purchase of coal and timber lands, having secured four hundred acres of what was regarded as some of the best paying property in this section. It was his aim to transform the romantic village of Mount Vernon into a thriving industrial center. He was among the first who mined coal in the Lackawanna Valley, having opened two mines from which anthracite was sold at retail, and was one of the prominent actors in trying to get the North Branch Canal extended to Scranton. He was also the moving spirit in making the arrangement by which the Delaware & Hudson Canal Company permitted the shipment of coal on their canal from Hawley by the Pennsylvania Coal Company. At one time, it was said that he knew every man living between Honesdale and Wilkes Barre, a distance of fifty miles, and that he did not have an enemy in all that number. Here is his obituary, which was published in the September 2, 1882 issue of the *Carbondale Advance*:

“Death of Alderman Waters. / Lewis S. Waters, Alderman of the Ninth ward of this city [Scranton], passed peacefully away from the cares of life, at his residence on Adams avenue, yesterday afternoon at half past five o’clock, surrounded by the members of his family. He had been in failing health for the last year and a half, and about a week ago caught a severe cold which culminated in pneumonia and hastened his death. Deceased was in his seventy-fifth year, was regarded as one of the pioneers of the Lackawanna valley and enjoyed an extensive acquaintance throughout Northeastern Pennsylvania. He was born in Phoenixville, in this state, February 6th, 1808, and in 1837 located in Mount Vernon, now known as Winton, in this county. Here he expended considerable money in the purchase of coal and timber lands, having secured four hundred acres of what has since become some of the best paying property in this section. It was his aim to transform the romantic village of Mount Vernon into a thriving industrial center, and at one time he employed a large number of workmen in the manufacture of lumber, which was shipped to Carbondale and Honesdale and rafted down the river to the Philadelphia market. He was among the first who mined coal in this valley, having opened two mines from which anthracite was sold at retail, and was one of the prominent actors in trying to get the North Branch Canal extended to Scranton. He was also the moving spirit in making the arrangement by which the Delaware & Hudson Canal Company permitted the shipment of coal on their canal to [possibly “from”] Hawley [emphasis added]. Out of this transaction grew the gravity road of the Pennsylvania Coal Company from Hawley to Pittston. He was also active in various other enterprises and did much to develop the section from which he had hopes of a flourishing future. An unlooked for circumstance, however, occurred in the failure of his Uncle Charles who was largely engaged in business in Philadelphia, and for whom he indorsed heavily. This swept away his property, but although it left him without means he was not entirely without hope, and by his untiring energy he secured a competence for his declining years. From Mount Vernon he removed to Archbald, where he resided at the breaking out of the war. He responded promptly to

his country's call and took two companies to Harrisburg, one enlisting in the Fifty-second and one in the Fifty-sixth Pennsylvania Volunteers. His health was not sufficiently robust for the rigors of the camp. And he was reluctantly compelled to return to Scranton, arriving here in 1865. The very next year the city was chartered and he was elected Alderman of the Ninth ward, a position which he filled ever since. He was a man of genial, refined tastes had hosts of friends among all classes, and was rarely gifted with the faculty of making all around him happy. His nature was frank and sunny, and to know him as to be his friend. At one time he knew every man living between Honesdale and Wilkes Barre, a distance of fifty miles, and it might be said with truth that he did not have an enemy in all that number. His home life was exceedingly happy, and he leaves behind him an interesting family. The funeral services will take place at his late residence Thursday afternoon at half-past two o'clock. Friends of the family are invited to attend. Interment will be private.—*Scranton Rep.*" (*Carbondale Advance*, September 2, 1882, p. 2)

In late February, 1888, William Armson, a peddler from Scranton with a horse and wagon, in attempting to get across the Delaware & Hudson tracks in the neighborhood of Winton, was struck by the 11:20 A.M. passenger train from Carbondale. Armson and his horse were killed. The wagon was crushed to atoms. Here is the article from the *Truth of Yesterday* as re-printed in *The Journal* of February 23, 1888:

"William Armson, whose home was on Raymond alley, this city, was engaged in peddling throughout the county with a horse and wagon. Shortly before noon today while in the neighborhood of Winton he attempted to cross the Delaware and Hudson track just ahead of the passenger train of which Mr. Heisted is conductor leaving Carbondale at 11:20 o'clock. He stood up in the vehicle to urge his animal over the track but before he could make it the train was upon him and he was hurled into the air fully fifty feet. The horse was killed and the wagon crushed into atoms. The train was stopped and backed up to the place where Armson, still alive, was picked up and placed in the baggage car to be brought to this city, but his injuries were of such a nature that he died on the way. The remains were received at the depot shortly after 12 o'clock and Coroner Burnett notified.--*Truth of Yesterday.*" (*The Journal*, February 23, 1888, p. 3)

Breaker Boys

In the biographical portrait of James J. Barrett that was published in the May 15, 1932 issue of *The Delaware and Hudson Company Bulletin*, we read the following summary statement about breaker boys in the anthracite breakers:

"Every colliery at that time [circa 1860] had its corps of from 20 to 40 boys known as slate pickers. These breaker boys, as they were also called, were seated high up in the breaker over the chutes down which the anthracite slid from one set of crushers and screens to the next. They watched the black stream as it swept by their feet and, checking its flow with their heavy hob-nailed shoes when they saw a foreign object, removed tons of slate and rock. In the latest type of operation, such as the Hudson Coal Company's Marvine Breaker, this work was done mechanically, and the breaker boy is but a memory." (Biographical portrait of James J. Barrett, pp. 147-148, 158 of the May 15, 1932 issue of *The Delaware and Hudson Company Bulletin*)

In *Miller and Sharpless*, pp. 121-122 we read the following on breaker boys:

"Sometimes breaker boys were as young as 6, but most started at 8 or 9. As the coal passed downward in the breakers through a series of chutes, boys, sitting crouched on narrow planks over the moving coal, their feet in the chutes to slow the flow, picked out the slate and other impurities. Sometimes old men or injured miners who could no longer work underground labored as 'breaker boys.' The popular refrain was: 'Twice a boy and once a man is the poor miner's life.' In the early days the boys worked 10 hours a day, six days a week. The daily wage was 45 cents. The boys were not allowed to wear gloves. Work discipline in the breakers was enforced by foremen who used clubs or leather switches to keep the boys at their work and to enforce order. Breaker boys were used in the mine fields well into the 20th century. The Pennsylvania legislature in 1885 made it illegal to employ boys under fourteen inside mines and under twelve in surface jobs. In 1903, these limits were raised to sixteen and fourteen, respectively. But the laws were seldom enforced."

In the *Reports of the Inspectors of Mines of the Anthracite Coal Regions of Pennsylvania, for the Year 1879*, p. 87, we read the following on the question of boys working in coal mines:

"Education of Boys Connected with Mines. / The English mining laws require boys under twelve and over ten years of age to attend school a certain number of hours per day and week, exclusive of Sunday school or night school; and, again, boys between the ages of ten and twelve cannot be employed underground, except upon certain educational conditions, and that the seam of coal be so thin, making it necessary to secure the services of said youths. Then, again, none under ten years can be employed outside or about the mines. A heavy penalty is attached for a

non-compliance in these matters, as also for the falsifying or forging of a certificate relating to the education of a boy. There are also restrictions of hours of employment for boys to ten hours per day, and they are not to be employed between the hours of nine at night and five o'clock in the morning; nor on Sunday; nor later than two o'clock on Saturday afternoon, &c. The mining law of Pennsylvania forbids the employment of boys under twelve years of age underground, but no provision has been made to limit the matter of employment of such on the surface, where they should not be employed below the age of twelve years, and the limit of twelve years of age for underground should be changed to fourteen."

In *Reports of the Inspectors of Mines*, 1887, p. 9-10, the number of breaker boys in the D&H collieries in the First Anthracite District is reported as follows:

Coal Brook and Midland tunnels, 61; Dixon shaft, Big and Clark Veins, 52; Eddy Creek shaft, 55; Grassey Island shaft 45; Jermyn No. 1 shaft, 41; Leggett's Creek shaft, Diamond and Big Veins, 52; Manville shaft, 23; Marvine shaft, 50; No. 1 shaft, Carbondale, 5; No. 3 shaft, Carbondale, 1; Olyphant, No. 2 shaft, 30; Powderly slope, 7; Racket Brook breaker, 44; Van Storch slope, Diamond and Big Veins, Clark vein, 56; White Oak slope and tunnel, 45.

Estimates of the number of breaker boys at work in the anthracite coal fields of Pennsylvania vary widely, and official statistics are generally considered by historians to undercount the numbers significantly. Estimates include 20,000 breaker boys working in the state in 1880, 18,000 working in 1900, 13,133 working in 1902, and 24,000 working in 1907.

Technological innovations in the 1890s and 1900s such as mechanical and water separators designed to remove impurities from coal significantly reduced the need for breaker boys, but adoption of the new technology was slow.

By the second decade of the twentieth century, the use of breaker boys was finally dropping because of improvements in technology, stricter child labor laws, and compulsory schooling laws. The practice of employing children in coal breakers largely ended by 1920 because of the efforts of the National Child Labor Committee, sociologist and photographer Lewis Hine, and the National Consumers League, who educated the public about the practice and succeeded in passing child labor laws.

On December 1, 1866, James A. Farrell, 146 Wyoming Street, Carbondale, at the age of eleven, began working as a breaker boy in the Coalbrook Breaker. In his biographical portrait in *The Delaware and Hudson Railroad Corporation Bulletin* of July 1, 1932, we read:

James A. Farrell, 146 Wyoming Street, Carbondale, “first entered the service of The Delaware and Hudson Canal Company as a slate boy, in the Coalbrook breaker, at the age of eleven, on December 1, 1866. At first he earned 35 cents a day although his rate was increased to 40 cents a few months afterwards. After six months in the breaker, James resigned to go to school, but returned to Delaware and Hudson service in 1868, in the Coal Department, tending a ventilating door in the mines.” (Biographical sketch of James A. Farrell—“The Engineer Hired a Horse”—in the July 1, 1932 issue (pp. 195-96, 203) of *The Delaware and Hudson Railroad Corporation Bulletin*)

Boys worked as slate pickers not only in the anthracite breakers in the Lackawanna and Wyoming Valleys but also at the D&H docks in Honesdale.

John J. Kalligan, in fact, began his 46-year career with the D&H as a slate picker at Honesdale in 1874, at the age of 13. (“Worked in *Dog's Nest* / Veteran Railroader's First Position Was at Canal Coal Loading Basin,” *The Delaware and Hudson Company Bulletin*, pp. 259-260, 268) In his biographical portrait we read:

“The coal after being dumped from the Gravity Railroad cars on the slope of the hill overlooking the present site of the passenger station, passed through a series of chutes to the boats in the canal basin. As the anthracite rattled down the chutes over the portion of the basin known as the ‘dog's nest,’ it passed by a group of eight or ten boys, seated in pairs on an elevated platform. Beneath there was room for three boats, each to be loaded with a different size of coal. / Retarding the flow of the black diamonds with their heavy leather shoes, the boys removed and threw into an empty car beside them what rock and slate had escaped the eyes of similarly employed youths in the breakers at Carbondale. This refuse was later removed to the Gravity railroad to be used for ballast and for filling ravines. After it had passed each successive pair of boys, and had undergone a final washing under a heavy stream of water pouring from a pipe at their backs, the coal dropped into the boats below.” (p. 259)

Slate pickers also worked at the Union Docks in Honesdale. In the biographical portrait of Joseph Flederbach (“Knew Our Canal Intimately,” pp. 199-200, *The Delaware and Hudson Company Bulletin*, July 1, 1927), on page 200, we read:

“As a slate picker he was first engaged on the Union dock which was located about on the site of the present [1927] turntable at Honesdale. There were six or eight other boys of his own age in the ‘gang’ that picked the ‘flat stuff,’ slate and stone, that still remained in the coal after it had passed through the screens on its way into the canal boats. Their day began at 6 a. m., and continued until 6 p. m., with an hour out for lunch, and their boss was Jimmy DeLancy. Later, he was similarly employed at the ‘Dog's Nest,’ as another screen located about where our [D&H] station now stands, was known.”

Later in his worklife with the D&H, Flederbach returned to work on the Union dock, this time as a dumper.

"The cars that came to the dock from the 'contract,' as the great coal pile that was the outstanding mark of Honesdale's foremost industry in those days was known, were of the 'jimmy' type. They held about four tons each and arrived in trips of fourteen cars each. It was his duty to dump their contents through a hopper into the chutes leading to the screens from whence the coal found its way into the boats. 'Breaking in' was his next work and, as the term suggests, consisted of controlling the speed of the cars as they came onto the dock. This, he declares, was the best job he ever had."

Among the news items about the borough of Jermyn that are reported in an article in the July 14, 1899 issue, p. 5, of the *Carbondale Leader* is the following:

**“MACHINES TAKE BOYS’ PLACES. / Experiment Tried at Jermyn Proves Successful—
A Column of Newsy Items From That Busy Borough. /** The patent slate pickers recently put into the Delaware and Hudson breaker are said to be working excellently but they are the means of throwing a number of boys out of work. Half a dozen slate pickers were discharged yesterday and it is rumored that others may follow. . .”

Shown below is a photograph of breaker boys at work in an anthracite colliery. Photograph in the collection of the Carbondale D&H Transportation Museum.



“Sometimes old men or injured miners who could no longer work underground labored as ‘breaker boys.’ The popular refrain was: “Twice a boy and once a man is the poor miner’s life.”

It is widely believed that the breaker boys were not allowed to wear gloves. This boy, it appears, is wearing a glove on his right hand.

Another photograph of slate pickers at work. The caption on the photograph identifies the site as Scranton, but the same image exists where the site is identified as Pittston, Wilkes-Barre, Forest City, &c.

This breaker boy appears to be an adult man.

Supervisor holding a stick, possibly a walking stick, possibly a stick used for discipline purposes

A breaker boy, possibly on a rest break



INTERIOR OF BREAKER. BOYS AT WORK. SCRANTON, PA.

43 S

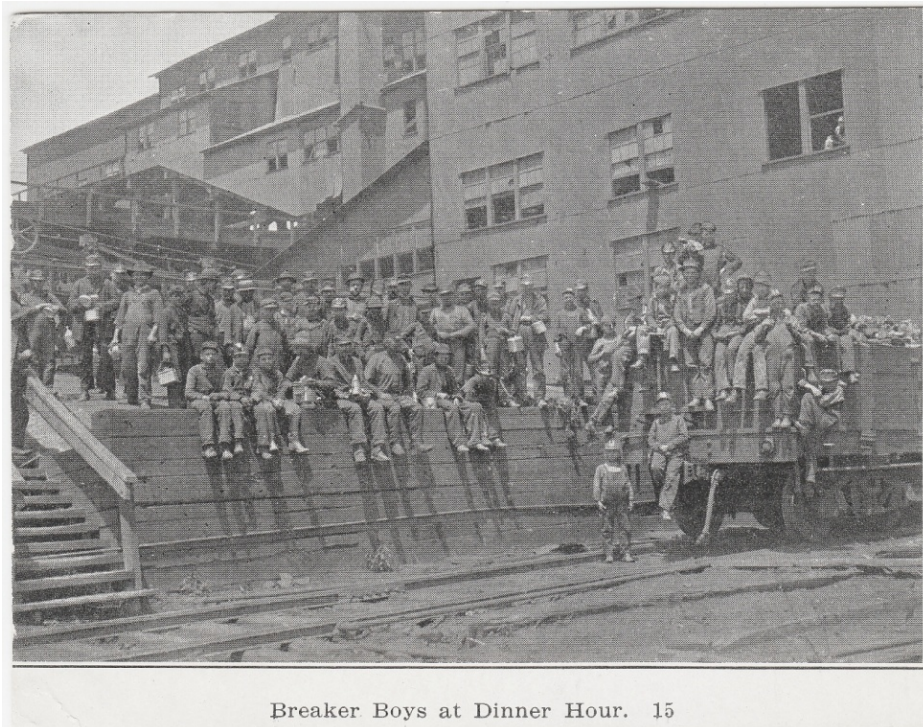
Another generic breaker boy photograph, this one titled “Scranton PA Slate Pickers in Coal Breaker”



Scranton PA Slate Pickers in Coal Breaker

These two breaker boys appear to be adult men.

Photograph titled “Breaker Boys at Dinner Hour”, in the collection of the Carbondale Historical Society and Museum.



Until well into the twentieth century, the three daily meals eaten by most Americans were called *Breakfast*, *Dinner*, and *Supper*. These breaker boys, many of whom are seen here holding their “Dinner Pails”, are shown outside a breaker at their “Dinner Hour”, possibly from noon to 1 P.M.

There are many adult men in this photograph, which suggests that perhaps everyone who worked in this breaker took their “Dinner Hour” at the same time. In spite of the difficult working conditions in these anthracite breakers, there must have been a strong sense of camaraderie among these colliery workers (fathers, sons, relatives, members of the same community).

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Slate Pickers—Scranton, Pa.

Energy Note: A colliery shipped only about 90 % of its production to market. At many collieries, about 10% of the coal processed there was burned at the colliery to run the breaker itself or produce the direct current which did so, to run the pumps that kept water out of the mines, to run the hoists and other machinery, to power the narrow-gauge connecting rail lines. The biggest users of energy in the colliery towns were always the collieries themselves.

Culm and Silt

When coal was removed from underground mines, a certain amount of unwanted material accompanied the coal to the surface. After coal breakers were invented in the middle of the nineteenth century, that unwanted material was removed from the coal in coal breakers.

Hollister, in his unpublished 1880 D&H manuscript in Chapter XX, pp. 160-164 (“THE INTRODUCTION OF COAL BREAKERS INTO THE LACKAWANNA COAL FIELDS WITH THEIR DESTRUCTIVE FEATURES. VON STORCH BREAKER”) had a lot to say about coal breakers—and none of it is positive.

“It was a disastrous day for all anthracite regions” said Hollister, “when competing coal men assented to waste a third part of the coal by breaking and screening it [emphasis added], for the sake of saving the remaining two-thirds in a prepared form.”

In addition, said he, “The eruptions of culm piles, heightened into pyramids or Black hills, all formed of the purest coal around every breaker from Carbondale to Nanticoke [emphasis added], exhibit the certainty and rapidity with which our streams are being choked and our mountains depleted of their value by a process alike wasteful and exhausting. True, it offers it advantages to the indolent consumer but how fatal to the interior and exterior of our frail and unresisting hills and valleys!

Hollister cites other authorities on the question of the percentage of loss of coal when in “the tireless jaws of the breakers”: “The actual loss in coal while the iron teeth and tireless jaws of the breakers subdue lump into ordinary stove coal, has been estimated by Daddow at 20 to 25 per cent [emphasis added]. This estimate is too small according to more competent judges.”

The percentage of loss during the breaking process was higher than Daddow’s estimate, said Hollister, and he reports that “I. W. Chittenden. . found the actual loss of volume in anthracite while preparing it by the usual grinding or breaking process, to be precisely 29 5/10 per cent, or about one-third of its real weight [emphasis added].

The amount of coal in the culm piles then in existence, said Hollister in 1880, if it could be utilized, would provide enough energy for many generation to come. He said: “Within the Schuylkill, Lehigh, Lykens, Wyoming and Lackawanna coal area sufficient culm has been swelled into hills to go far toward liquidation of the national debt by supplying twenty generations of come with fuel provided it could be utilized. . . [emphasis added].”

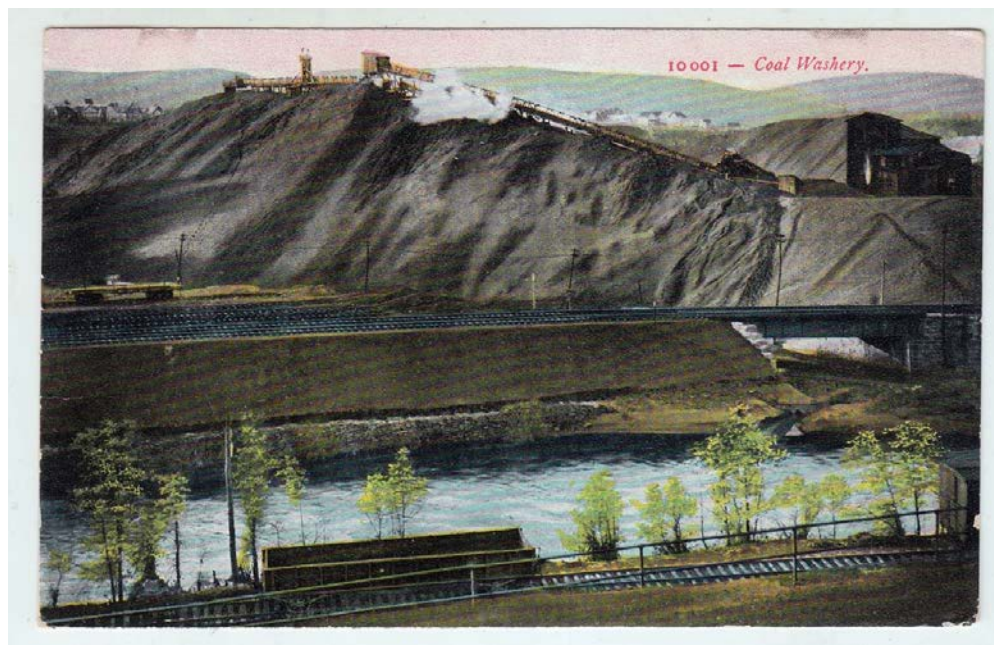
Here is the main body of Hollister’s thoughts on breakers, as expressed in his 1880 manuscript:

“No one residing in the coal region can forget the time when no other kind of coal was seen or sold but lump coal. The miner or laborer immured with pick and drill in his lengthened chamber, broke up the large lumps in the mines simply to facilitate easier loading into mine cars. In this form anthracite was carried to market and broken only as it was used without waste. Until within a comparatively a short period, no prepared coal found its way into recognition and use. Each piece was fractured by hand with the same patient labor that wood, drawn from the forest in logs or tree tops, required strokes from the axeman to fit it for the fire place. One of the greatest conspirators of modern times against economy is that invention of the devil known as a Coal Breaker; an institution that inaugurated a system of waste and loss of anthracite beyond repair and almost beyond measure. When posterity contemplates the flattened hills and culm-burning valleys a century hence this enemy will be taunted as the robber of the Continent. / The credit or reproach of instituting one in this coal district, does not belong to this [D&H] Company. It was a disastrous day for all anthracite regions when competing coal men assented to waste a third part of the coal by breaking and screening it, for the sake of saving the remaining two-thirds in a prepared form. The eruptions of culm piles, heightened into pyramids or Black hills, all formed of the purest coal around every breaker from Carbondale to Nanticoke, exhibit the certainty and rapidity with which our streams are being choked and our mountains depleted of their value by a process alike wasteful and exhausting. True, it offers it advantages to the indolent consumer but how fatal to the interior and exterior of our frail and unresisting hills and valleys! / The actual loss in coal while the iron teeth and tireless jaws of the breakers subdue lump into ordinary stove coal, has been estimated by Daddow at 20 to 25 per cent. This estimate is too small according to more competent judges. I. W. Chittenden, a gentleman whose unquestioned good judgment and official position in the Delaware and Hudson Canal Company, gives weight to his opinion, has investigated this matter most thoroughly. By the most careful and repeated computations, he found the actual loss of volume in anthracite while preparing it by the usual grinding or breaking process, to be precisely $29 \frac{5}{10}$ per cent, or about one-third of its real weight. This appalling amount is a total loss to coal territory, to all Companies engaged in its production and to the world at large. / The Delaware and Hudson Canal Company alone own four hundred millions tons of coal, over and above the fifty million tons already mined including wastage in culm. Before half of this is mined, provided the same destructive plan of preparing it as now is continued, the culm piles which already suffocate villages and smother the cities along the Lackawanna will close up the valley with a mountain of ground coal higher than the Moosic and obliterate this fair vale from the sight of coming generations. / Within the Schuylkill, Lehigh, Lykens, Wyoming and Lackawanna coal are sufficient culm has been swelled into hills to go far toward liquidation of the national debt by supplying twenty generations of come with fuel provided it could be utilized. The false economy of breaking up coal by machinery, in the Northern Coal Field, began under the auspices of the Delaware and Lackawanna and Western Railroad Company at the Diamond Mines in Scranton in 1852. . .

The breakers against which Hollister spoke were dry breakers, and the primary negative consequences of those breakers were the culm piles adjacent to those breakers. One can well

imagine what Hollister's response might be to the so-called wet breakers that were common after Hollister/in the latter decades of the nineteenth century when virtually all of the waterways in the anthracite region will clogged with silt that emanated from those culm piles, from wet breakers, and from coal washeries (in which water and mechanical techniques that relied on gravity and the difference of density between coal and its impurities--which were usually more densely packed due to the fact that they were inorganic--were used to separate the coal from unwanted materials).

Here is a post card photograph of a typical anthracite washery. This post card is in the collection of the Carbondale Historical Society.



Coal Washery

When the new D&H breaker was built on the "flats" at the north end of the Carbondale yard in 1899, the largest coal breaker in the world at that time, the latest coal cleaning and separating machinery was installed in the new breaker. At the same time, a separate washery was erected on the site of the present Coalbrook breaker through which the culm from the breaker would be run before being dumped into a culm pile. Those facts we know from the following article that was published in the July 17, 1899 issue of the *Carbondale Leader*:

"LARGEST IN THE WORLD. / New D. & H. Breaker in Course of Construction on the Flats. / The largest coal breaker in the world will soon be among Carbondale's industries, the mammoth one now in course of construction on the 'flats' taking the place of the several smaller ones now operated in this vicinity by the Delaware and Hudson company. Four thousand tons

daily will be the coal breaking and preparing capacity of the great plant and the upper railroad yard will become the center of the immense traffic. The remodeling of the yards has been begun and daily hundreds of men are engaged laying new tracks and moving the old ones. / The anthracite park grounds are fast assuming the appearance of another yard. Here also men are engaged getting the place in readiness. It is said in mining circles that the culm dumping ground that will be made in the upper end of the park will be paved or flagged in order that a steam shovel may be used. It is the intention of the company that nothing marketable will go to waste as it is learned from a fairly reliable source that the latest coal cleaning and separating machinery will be used in the new breaker besides the building of a washery on the site of the present 'Coalbrook breaker' through which the culm will be run before being dumped [emphasis added]." (*Carbondale Leader*, July 17, 1899, p. 2)

The waste water from the breakers and the washeries was disposed of by directing it into unused/former coal mines and into streams and rivers where fine bits of coal and clay and sand became a sediment called silt at the bottom of those waterways, the Lackawanna and Susquehanna Rivers.

That silt contained untold thousands of tons of coal particles that were later vacuumed up by the "Hard-Coal Navy" on the Susquehanna River and sold to utilities and other industries. In *Stranahan* (pp. 153-158) we read the following about the silting up of Susquehanna River and its tributaries:

"The Susquehanna and its tributaries offered a convenient means of disposing of coal waste. In places along the North Branch, coal silt was 15 to 25 feet deep. The coal silt washed down the Susquehanna, sustaining what became known as the Hard-Coal Navy, a fleet of battered steamboats and barges that piled the river as far north as Sunbury until the 1950s. The fleet vacuumed up hundreds of thousands of tons of coal particles and silt each year from the river bottom and sold them to utilities and industries. About 800,000 tons of coal silt were dredged from the Schuylkill annually in the 1940s, much of it winding up at the Philadelphia International Airport." (*Stranahan*, pp. 153, 158)

On December 8, 2016, Bridget LaMonica gave to the author a remarkable book titled *Anthracite Culm and Silt* (Topographic and Geologic Survey Bulletin M 12) by James D. Sisler, Thomas Fraser and Dever C. Ashmead, which was published by the Commonwealth of Pennsylvania Department of Internal Affairs, in 1928.

Here are the cover and page one of that remarkable book:

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF INTERNAL AFFAIRS

ANTHRACITE CULM AND SILT

By
JAMES D. SISLER
THOMAS FRASER
and
DEVER C. ASHMEAD



TOPOGRAPHIC AND GEOLOGIC SURVEY
BULLETIN M 12
1928

PENNSYLVANIA
GEOLOGICAL SURVEY
FOURTH SERIES

Bulletin M-12

ANTHRACITE CULM AND SILT

By

James D. Sisler, Thomas Fraser, and Dever C. Ashmead

A Cooperative Study
between the

PENNSYLVANIA TOPOGRAPHIC AND GEOLOGIC SURVEY
Geo. H. Ashley, State Geologist

PENNSYLVANIA WATER AND POWER RESOURCES BOARD
Charles E. Ryder, Chief Engineer

UNITED STATES BUREAU OF MINES
Scott Turner, Director

DISCLAIMER FOR MINERAL RESOURCE REPORT 12

(December 1988)

This report is of historical interest only. The information in it is based on a study made over 60 years ago. **It should not be used as the basis for current investment or economic analysis.** Virtually all of the coal-rich CULM BANKS (see p. 15) described herein have long since been processed and eliminated.

HARRISBURG, PA.
1928

77°00' 76°30' 76°00'

SUSQUEHANNA RIVER

AND SILT RESOURCES

IN PENNSYLVANIA

AND FIELDS

ANTHRACITE SILT AND CULM DEPOSITS

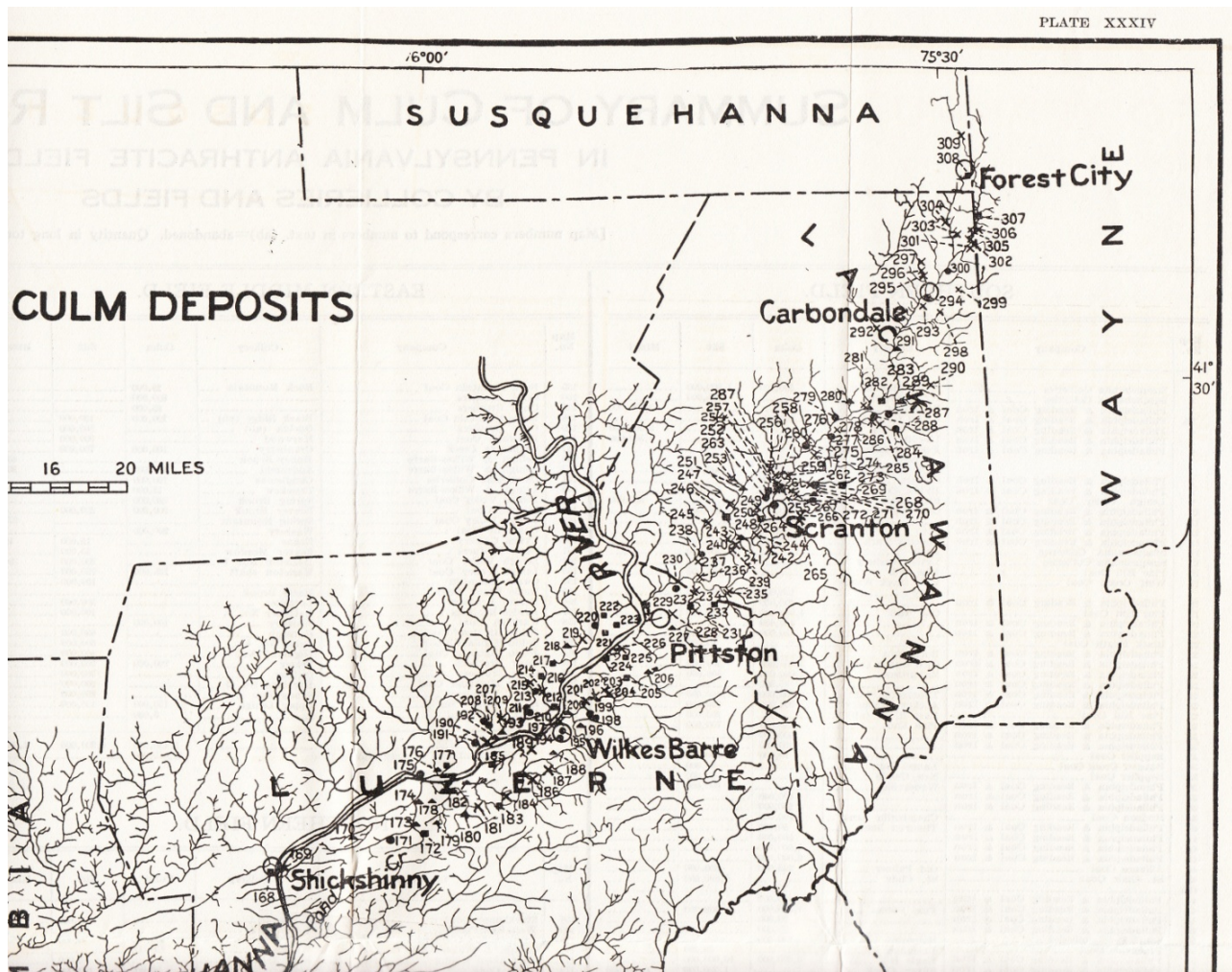
1926

Scale

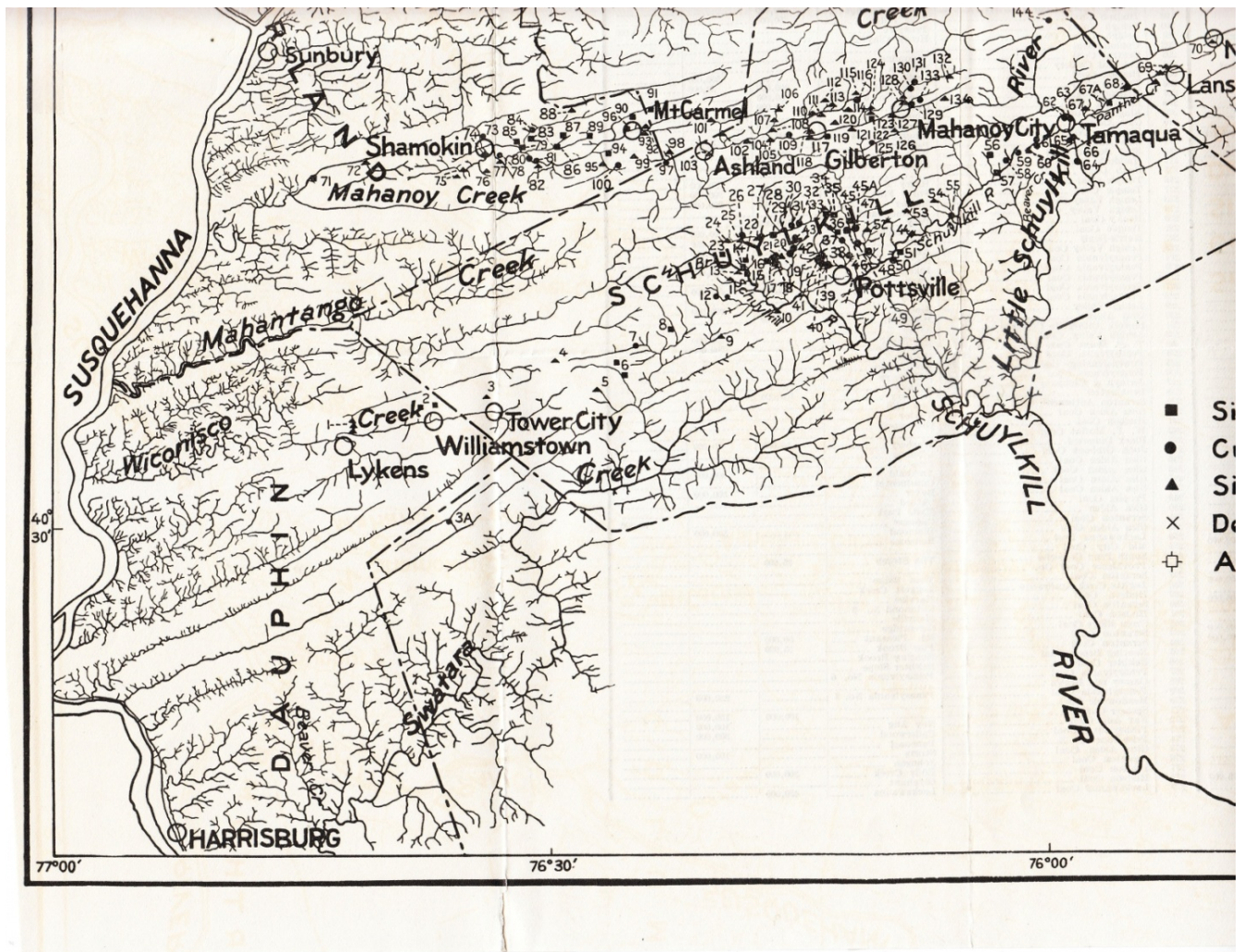
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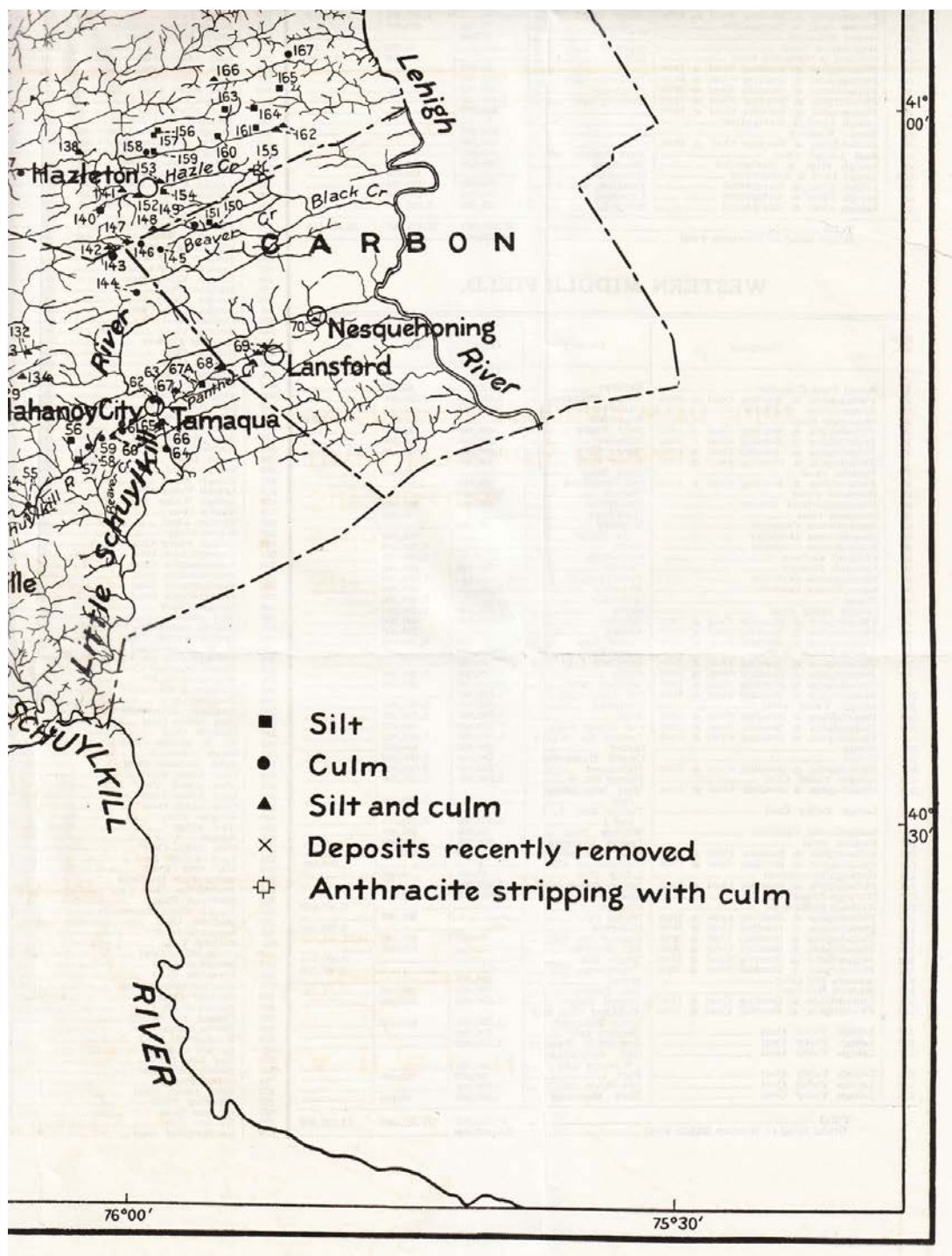
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The Northern Field is the section of the anthracite region in northeastern Pennsylvania that is our primary concern in this D&H series.

Here is the Northern Field section of a "Summary of Culm and Silt Resources in Pennsylvania Anthracite Fields by Collieries and Fields":

SUMMARY OF CULM AND SILT RESOURCES IN PENNSYLVANIA ANTHRACITE FIELDS BY COLLIERIES AND FIELDS

[Map numbers correspond to numbers in text. (ab)=abandoned. Quantity in long tons.]

NORTHERN FIELD.

Map No.	Company	Colliery	Culm	Silt	Mixed
168	Stackhouse Coal	Salem		200,000	
169	West End Coal	Mocanaqua			75,000
170	Susquehanna Collieries	No. 6	600,000	50,000	
171	Lehigh & Wilkes-Barre Coal	Wanamie	250,000		
172	East Alden Mining	East Alden		15,000	
173	Alden Coal	Alden	50,000	150,000	
174	Susquehanna Collieries	No. 7	30,000	35,000	
175	Grand Tunnel Coal	West Nanticoke		60,000	
176	George F. Lee	Chauncey	50,000	40,000	
177	Glen Alden Coal	Avondale		200,000	
178	Glen Alden Coal	Auchincloss	300,000	200,000	
179	Glen Alden Coal	Bliss	500,000	250,000	
180	Glen Alden Coal	Truesdale	500,000	200,000	
181	Lehigh Valley Coal	Warrior Run			
182	Glen Alden Coal	Loomis	300,000	200,000	
183	Pittston Coal Mining	Hadley		250,000	
184	Lehigh & Wilkes-Barre Coal	Sugar Notch			
185	Lehigh & Wilkes-Barre Coal	Buttonwood		200,000	
186	Lehigh & Wilkes-Barre Coal	Maxwell			
187	Lehigh Valley Coal	Franklin			
188	Lehigh & Wilkes-Barre Coal	Stanton			150,000
189	Lehigh & Wilkes-Barre Coal	South Wilkes-Barre			
190	Plymouth Red Ash Coal Co.				
191	Lehigh & Wilkes-Barre	Nottingham	5,000		
192	Plymouth Coal	(ab)	10,000	5,000	
193	Lehigh & Wilkes-Barre Coal	Lance			1,000,000
194	Lehigh & Wilkes-Barre Coal	Hollenback	100,000		
195	Sullivan & Flinn Coal		50,000		
196	Hudson Coal	Baltimore No. 5	200,000	150,000	
197	Lehigh Valley Coal	Dorrance			
198	Lehigh Valley Coal	Mineral Springs	200,000		
199	Hudson Coal	Pine Ridge	250,000		
200	Lehigh Valley Coal	Prospect			500,000
201	Lehigh Valley Coal	Henry Clay			
202	Conlon Coal				
203	Central Coal	Wyoming			
204	Colonial Colliery	Madeira			

205	Hudson Coal	Lafin		300,000	
206	Traders Coal	Ridgewood	200,000	30,000	
207	Hudson Coal	Loree No. 5	50,000		
208	Kingston Coal	Gaylord	10,000		
209	Kingston Coal	Kingston No. 2			
210	Glen Alden	Woodward	50,000		
211	Kingston Coal	Kingston No. 4	100,000		
212	Glen Alden	Pettebone		60,000	
213	East Boston Coal	East Boston	700,000		
214	Haddock Mining	Black Diamond			
215	Raub Coal				
216	Temple Coal	Harry E		250,000	
217	Temple Coal	Forty Fort		200,000	
218	Lehigh Valley Coal	Maltby	50,000	200,000	
219	Lehigh Valley Coal	Westmoreland			
220	Healey Coal	Troy	100,000		
221	Temple Coal	Mt. Lookout		300,000	
222	Harris-Denly	Kintz		50,000	
223	Lehigh Valley Coal	Exeter		200,000	
224	Pennsylvania Coal	No. 14		150,000	
225	Pennsylvania Coal	Inkerman No. 6		300,000	
226	Pennsylvania Coal	Ewen			
227	Pennsylvania Coal	Butler	100,000	400,000	
228	Pennsylvania Coal	No. 9			
229	Lehigh Valley	Seneca		200,000	
230	Glen Alden	Hallstead	200,000		
231	Suffolk Anthracite Collieries	Avoca			
232	Lehigh Valley Coal	Heidleberg		250,000	
233	T. E. Quinn Coal	Consolidated		200,000	
234	Pennsylvania Coal	Central			
235	Powell-Jennings Coal	Rocky Glen			
236	Pennsylvania Coal	Old Forge			
237	Jermyn & Company	Jermyn			
238	Dennington	Washery	100,000		
239	Seranton Anthracite Coal	Oak Hill			
240	Glen Alden Coal	Taylor			
241	Hudson Coal	Greenwood			
242	W. Y. Moffat Coal				
243	Black Diamond	Washery	50,000	20,000	
244	John Gibbons Coal	Gibbons			
245	Glen Alden Coal	Pine			
246	Glen Alden Coal	Archbald		300,000	
247	Glen Alden Coal	Continental			
248	Glen Alden Coal	Baker		300,000	
249	Peoples Coal	Oxford			
250	Glen Alden	Hyde Park			
251	Seranton Coal	Capouse			70,000
252	Glen Alden Coal	Diamond		500,000	
253	Lackawanna Fuel	Ransome			
254	Mid City Coal				
255	South Penn Collieries	Von Storch	25,000		
256	Providence Coal Co.				
257	Seranton Coal	West Ridge			
258	Legitts Creek Anthracite	Leggett Creek			
259	Hudson Coal	Marvine			
260	Seranton Coal	Richmond No. 3			
261	Hudson Coal	Manville			
262	Green Ridge Coal	Greenridge			
263	Seranton Coal	Mt. Pleasant	50,000		
264	Seranton Coal	Pine Brook	35,000		
265	Roaring Brook Coal	Roaring Brook			
266	Reichter Coal	Reichter Slope			
267	Pennsylvania Coal	Pennsylvania No. 5			
268	Carney and Brown				
269	Pennsylvania Coal	Pennsylvania No. 1		250,000	
270	Meadowside Coal				
271	Spencer Coal		100,000	150,000	
272	Nay Aug Coal	Nay Aug		100,000	
273	Pennsylvania Coal	Underwood		300,000	
274	Price-Pancoast	Pancoast			
275	Glen Alden Coal	Storrs		100,000	
276	Seranton Coal	Johnson			
277	Hudson Coal	Eddy Creek	300,000		
278	Hudson Coal	Olyphant			
279	Lackawanna Coal	Lackawanna	450,000		

NORTHERN FIELD—Continued.

Map No.	Company	Colliery	Culm	Silt	Mixed
280	Scranton Coal	Ontario	200,000	150,000	-----
281	Scranton Coal	Raymond	-----	-----	-----
282	Radient Coal	Rhondda	200,000	150,000	-----
283	Scranton Coal	Riverside	-----	30,000	-----
284	Humbert Coal	Sunnyside	50,000	-----	-----
285	Temple Coal	Sterrick Creek	on fire	-----	-----
286	Mt. Jessup Coal	Mt. Jessup	-----	-----	-----
287	Winton Coal	Winton	200,000	-----	-----
288	Suffolk Anthracite Collieries	Rose Washery	150,000	-----	-----
289	Hudson Coal	Gravity Slope	175,000	150,000	-----
290	Suffolk Anthracite Collieries	Tappan	-----	-----	-----
291	Hudson Coal	Jermyn	200,000	200,000	-----
292	Ammerman Coal	Fireside	-----	-----	-----
293	Hillside Coal & Iron	Erie	-----	-----	-----
294	Hudson Coal	Powderly No. 2	200,000	-----	-----
295	Sunrise Coal	-----	-----	-----	-----
296	Fallbrook Coal	Fallbrook	-----	-----	-----
297	Lackawanna Coal Corp.	Falls	-----	-----	-----
298	Suffolk Anthracite Collieries	Boland	-----	-----	-----
299	Racket Brook Coal	Racket Brook	-----	-----	-----
300	Hudson Coal	Coalbrook	225,000	-----	-----
301	Murray Coal	Murray B	-----	-----	-----
302	Suffolk Anthracite Collieries	Nay Aug No. 2	-----	-----	-----
303	Wilson-Hill Coal	Franklin	-----	-----	-----
304	Richmondale Coal	Richmondale	-----	-----	-----
305	Temple Coal	Northwest	-----	-----	-----
306	Red Haven Coal	East Side	-----	-----	-----
307	Hudson Coal	Clinton	-----	100,000	-----
308	Pennsylvania Coal	Forest City	-----	100,000	-----
309	Clifford Coal	Clifford	-----	-----	-----
Total			7,965,000	8,195,000	1,795,000
Grand total of Northern Field			17,955,000	-----	-----

Culm and silt stored in banks in the Anthracite Region, in long tons*

Field	Culm	Silt	Mixed	Total
Southern	37,970,000	37,415,000	12,700,000	88,085,000
Western Middle ..	42,585,000	41,935,000	17,175,000	101,695,000
Eastern Middle ..	2,430,000	6,200,000	1,385,000	10,015,000
Northern	7,965,000	8,195,000	1,795,000	17,955,000
Total for all fields	90,950,000	93,745,000	33,055,000	217,750,000

*These tonnages are not recoverable marketable coal. The material composing these banks ranges from 20 to 80 per cent combustible material.

These figures are corrections of those on page 21.

Here is the introduction to *Anthracite Culm and Silt* by James D. Sisler, Thomas Fraser, and Dever C. Ashmead:

ANTHRACITE CULM AND SILT

BY JAMES D. SISLER, THOMAS FRASER, AND DEVER C. ASHMEAD

INTRODUCTION

“Pennsylvania has produced 5,500,000,000 [five billion five hundred million] tons of anthracite.”

Pennsylvania has produced 5,500,000,000 tons of anthracite. Active mining started in 1830 and has increased until the annual production ranges from 80,000,000 to 85,000,000 tons. In mining anthracite 10 to 15 per cent of the coal is of very fine size, and can be marketed and used only in prepared form or on specially constructed grates. Nine million to 10,000,000 tons of this fine sized material is produced each year in the anthracite region. In addition to this fine sized material several million tons of rock are brought to the surface and piled on huge rock banks. The disposal of this waste material has become a serious problem in the anthracite region. The level land areas are at a premium because anthracite occurs in basins with steep-pitching slopes and the natural topography coincides with the structure, that is, the basins are flanked on both sides by mountains and streams flow through the valleys.

The valley in which the Northern Anthracite Field occurs is broader than those of the other fields and naturally provides more storage for this waste material. This land is valuable for building purposes and it is difficult to find suitable locations for waste banks.

In order to make room for more waste material much fine sized coal, boiler ashes, and pulverized rock is allowed to go into the streams each year. This silting has resulted in serious damage at numerous localities. Within the last few years many of the banks have been worked over and the good coal recovered from them. This has relieved, of course, the accumulation of silt. Companies also have been taking more interest in the proper means of settling and storing the fine material. At certain localities the stream beds have been dredged and at some localities the material has been entirely removed.

Disposal of Anthracite Culm and Silt

Steep-pitch mining makes it necessary to bring to the surface all material which is mined. The coal which goes to the top of the breaker is mixed with rock and slate. The breaker separates the impurities from the coal, and the rock and slate are discharged on rock banks on the breaker property. The fine sized material, which is usually 60 to 85 per cent combustible, issues from the breaker with the breaker water. Some companies let this material go directly into the streams, but it is common practice to settle the water so that the largest pieces of the material are recovered. This settling is effected in numerous ways. The most prevalent means

(13)

is by building up a silting dam or bank. A silt bank is started by boarding up a suitable area and the water runs over this area at a low gradient and deposits most of its burden before it flows over the boards. As the area behind the boards gradually fills up the edges of the bank are raised higher by the addition of more boards and by piling silt against them to hold the weight of the material. This process is repeated until the silt dam has been built up 20 or 30 feet. This manner of settling is very good provided the stream of breaker water is turned into numerous channels upon entering the silt bank. If the water is not spread out fan shape over the bank it runs directly through it, does not deposit any of its material, and takes with it some of the material which has already been deposited on the bank. In order to correctly settle silt in this manner it is necessary to have a man constantly on the location directing the course of the breaker water, building up the sides of the bank, and raising the sluices for the clarified water to escape from the bank. The water which soaks through the bank and comes out at the bottom is practically clear, and if the water is properly settled before it reaches the sluices which are placed in the walls of the bank, it also is practically clear.

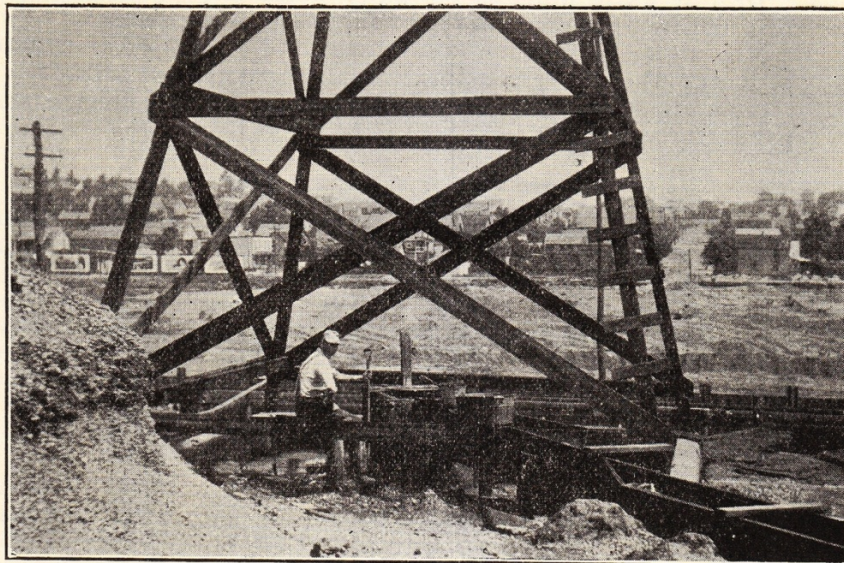
At locations where land is at a premium or the hillsides are steep, breaker water is generally settled in a tank. This tank is usually constructed of concrete of a size large enough to adequately take care of the entire output of water. This tank is usually divided into two or more compartments; the water is run into it and deposits the largest sizes in the first compartment. The sizes become smaller in each succeeding compartment, and if the tank is large enough and is not allowed to fill up, the water is practically clear when it issues from it. The silt which has accumulated in the tank is removed by an automatic scraper line or a suction pump. The great difficulty with this method of settling is that some companies are somewhat neglectful and allow the tanks to fill up with silt and the water runs directly through them without settling the material.

Numerous settling tanks, thickeners, and clarifiers are on the market and are described in the chapter on preparation. These mechanical devices are almost perfect in their action. Breaker water which is heavily laden with material can be settled within a short time so that it issues as clear water from the tank. The action of these tanks can be regulated so that any percentage of the material can be separated from the water.

The Northern Anthracite Field is thickly populated and mining is carried on beneath valuable surface properties. It is necessary to provide proper support for these properties and in order not to leave large tonnages of virgin coal in pillars many companies are using silt for mine filling. When the coal is removed silt is flowed into the opening. It gradually consolidates and forms solid pillars and permits the mining of the solid coal pillar which has been temporarily left for surface support. Thousands of tons of silt have been used for mine filling in the Northern Anthracite Field and some has been used in the other fields. The method of mine flushing varies but little. The silt is usually mixed with water

and pumped or dropped inside the mine through a bore hole or through a pipe in the shaft. It is conveyed to the proper place by pipes, or on steep pitches it is allowed to find its own course. Bulkheads are built of substantial wood to prevent the spread of the material throughout the entire mine. These bulkheads are sufficiently porous to permit the water to drain out of the silt. After standing for a few months the silt is consolidated and it is pos-

PLATE II



Bore hole used for silting mine workings at Stanton Colliery, Lehigh & Wilkes-Barre Coal Co. The silt enters the bore hole through a wooden sluice.

sible to drive gangways through it. The use of silt as mine filling not only prevents subsidence but it holds up the roof inside the mine and makes possible higher percentages of recovery.

Some of the rock which is a by-product of coal mining, is pulverized and sent back into the mines. Boiler ashes are also used for mine flushing. This process has resulted in the removal of large silt banks in the Northern Field and has reduced the surface accumulation of this material.

Definitions

The term culm has evolved in its meaning since the beginning of anthracite mining. In the early days of the industry practically all the coal was prepared dry. The fine-sized material, as well as the sizes which were not marketable at that time, were deposited along with the waste material in huge banks on the breaker property. These banks contain from 50 to 80 per cent coal, and some of them have large percentages of steam sizes in them. These banks have been practically removed with the exception of those owned by large companies in the Southern Field. These banks are known as culm banks. A culm bank is defined as an accumulation of rock, bone, and coal from an old dry breaker.

A rock bank is the refuse from a modern wet breaker. These rock banks contain from 1 to 5 per cent of marketable coal, and are of no value except for mine filling.

A silt bank is an accumulation of fine-size coal, bone, and slate which is settled out of breaker water. This material is known also as sludge, fines, slush, and mud.

Breaker water is the water which is used in the breaker jigs during the preparation of coal.

Drip or waste water is the water which drips from the storage bins and from railroad cars after the coal has been loaded.

Mine water is the water which is drained or pumped from a mine or drift. This water contains a small percentage of solids.

Mud, slime or sludge is refuse material from a breaker which passes through a 200 mesh screen.

Size and Number of Silt and Culm Banks

During war time and strike periods since 1915 a large number of the old culm banks were worked over. Some of these banks have been sold to public service corporations as reserves of boiler fuel, others are being held in reserve by large companies for emergency fuel. These banks range in size from very small accumulations to 5,000,000 tons of material. Most of the banks of any value contain a few hundred thousand tons of material. These banks vary greatly in quality and in size. Some of the older banks contain 80 per cent coal. The newer banks contain from 20 to 60 per cent marketable coal.

Silt banks also vary much in size and quality. These banks range from a few thousand to 10,000,000 tons in size. The silt usually contains from 15 to 50 per cent ash. Some of the banks have been mixed with boiler ashes and are of little value. The banks which have been very seriously polluted with ashes have not been estimated.

Old culm banks and new rock banks have been used for the settling of breaker water. This has resulted in a mixture of culm and silt or rock and silt. If the mixture is culm and silt the bank is of great value, but if the mixture is rock and silt the value of the material is problematical.

CONCLUSIONS

General Conclusions

The large population and great wealth of the anthracite region is directly attributable to the occurrence and mining of anthracite. Before 1830 the valleys in the anthracite region were forested and were the sites of numerous small clearings where farmers were beginning to cultivate the fields. The discovery and subsequent development of anthracite has changed the appearance of the anthracite district. It is no longer a region of forests and fertile fields. Mine water has polluted most of the streams, the surface is scarred with holes where mine workings have fallen in, and enormous piles of rock, silt, and culm have accumulated. If anthracite were not being mined the valleys would be fertile farm lands, and the mountains between the valleys would be forested.

In viewing the apparent destructiveness of mining one must not forget the great wealth which has come from this industry and the great benefit that has been to the development of all of Pennsylvania's resources. The anthracite industry drew to Pennsylvania many of its Scotch, Welsh, and English pioneers. It has provided fuel for thousands of homes for 100 years; it has brought prosperity to thousands of people. The havoc which anthracite mining has done to the streams and forests in the anthracite field is nothing in comparison with the great influence it has had upon the development of Pennsylvania.

The anthracite industry is the basic industry of the region. Without it the area would be depopulated. The pollution of streams by mine water, the silting of channels by waste material, and the destruction of vegetation by mining is a necessary evil of this industry.

It does not follow, however, that an effort should not be made to reduce these objectionable features in the mining of coal to the lowest practical limit, without curtailing production or materially affecting the cost to the consumer. This investigation seems to indicate that there is opportunity for marked improvement in the disposal of waste material from the mines and breakers; in fact, improvement has already occurred because of the recovery in the breakers of the finer sizes and the use of silt for mine filling, and there is every reason to believe that if the coal operators should unite and co-operate in a general study of the problem, methods could be devised or present methods improved and put in more common use, with increased efficiency in operation, which would greatly reduce the quantity of silt at present being discharged into the streams in the Anthracite Region.

Specific Conclusions

The sampling work upon which the following estimates of silt production and fine coal losses are based, extended from May 1 to December 1, 1926, a period of seven months. Banks at 47 collieries were sampled. The aggregate production of these collieries in 1925 was 10,664,000 tons. This was approximately 17 per cent of the total production of anthracite. Twenty-two of these collieries are in the Northern Field; eight are in the Eastern Middle Field; eight in the Western Middle Field, and nine are in the Southern Field. Extensive accumulations of culm and silt in the valley of Beaver Creek and in the Mahanoy Valley also were sampled.

Although sampling work was done at only a comparatively small proportion of all the operating collieries, the collieries selected for study were so distributed as to represent the entire field geographically. They were selected after a careful survey of the field during the previous season, so as to include operations using all the variations of mining, preparation, and silt handling methods.

This investigation was extensive enough to obtain reliable data as to the quality of coal in silt accumulations throughout the field and to estimate the total annual production of silt. Although there is great variation in both the quality and quantity of fines in the coal which is produced in the anthracite fields, the variations are largely regional and were considered by separately treating the numerous distinct areas in which mining conditions are similar.

The methods of storing and disposing of silt and slimes and handling of waste water vary so greatly that it is much more difficult to arrive at a general estimate of losses of fine coal. Discharge of fine coal from preparation plants which were visited in this survey ranged from none to 15 per cent of the total tonnage of prepared coal. Averages of such diverse size are of little value for specific application in any one operation. However, some general conclusions are obvious from the results of the study. Measurements were made at operations representing all methods and all degrees of effectiveness in silt storing practice to be found in the anthracite field.

Quality of coal in silt. The quality of coal in silt banks in the anthracite field was found to range widely both as to purity and percentage of commercial sizes. There are general regional differences in the character of the coal beds and the mining conditions that affect the character of the silt which is produced in the various mining districts. There are still greater local variations in the silt deposits and current silt which is produced at various collieries, due mainly to (1) age of banks, (2) methods of handling silt, (3) method of cleaning coal, and (4) effectiveness of sizing screens.

Percentage of oversize. The common practice in screening in modern plants is to make the smallest commercial size over screens with $3/32$ -inch round holes. At a few plants No. 4 buckwheat (No. 2 barley) is shipped intermittently and at some plants $1/16$ -inch holes or a combination of $1/16$ inch and $3/32$ -inch holes is used to obtain a certain percentage of undersize coal in the No. 3 buckwheat (No. 1 barley). Whatever the local screening practice may be, it generally aims to discharge from the breaker no coal larger than $3/32$ inch, which is the lower standard size limit of No. 3 buckwheat coal. Coal found in the silt discharge or in the silt banks that will not pass through a $3/32$ -inch testing screen is, therefore, regarded as a loss of marketable size coal.

The percentage of oversize in new banks and current silt being produced at the collieries where samples were taken varied in the Northern Field from 1 to 16 per cent, with many more observations nearer the lower limit than the upper. The normal may be taken as 4 to 6 per cent, and many collieries lose only 1 to 2 per cent of commercial sized coal in the silt. This loss varies greatly all over the anthracite field due primarily to differences in screening practice. There is little difference as a whole among the different mining fields. A high percentage of oversize in the silt is apparently more common in the Southern Field than elsewhere, with the exception of the mines in the Panther Valley, which have reduced this loss to practically nothing. In most plants where auxiliary silt shakers are in use to re-screen the silt just before it goes to the bank, the loss of No. 2 buckwheat is under 2 per cent.

Percentage of slime. The percentage of slime, or material which passes through 200 mesh, in the silt which is produced is subject to considerable regional variation. It increases generally from north to south and from east to west with local variations. This is primarily due to differences in the friability of the coal and the pitch of the coal beds. The percentage of 200 mesh material in samples of silt from fresh mined coal ranged from 13 to 15 per cent at most of the Wyoming Valley collieries to over 30 per cent at others in the South-

ern Field. Screen analyses were made by hand testing with Tyler screens on dry coal, and probably gave results which were consistently 3 to 5 per cent lower than the same samples would give by wet screening.

The percentage of fines in silt banks primarily depends upon the method of handling the silt from the washery to the bank and the effectiveness of settling. Locally, therefore, silt accumulations vary, in the proportion of material through 200 mesh, from 2 per cent up to the total quantity in the original silt produced from mine-run coal or even more if much bank coal has been handled in the preparation plant. The effect of various methods of handling and storing silt in retaining or eliminating slime is discussed more completely under silt handling methods.

Ash content and calorific value. The purity of the fine coal discharged at various collieries in the anthracite field varies, like the size, with local mining conditions and preparation practices. There is a fairly general adherence to certain regional averages. Disregarding exceptional cases, where unfavorable conditions prevail, the raw silt discharged from plants which treat fresh-mined coal in the Wyoming Valley, is 20 to 25 per cent ash. In the Eastern Middle Field it normally is 25 to 30 per cent ash, and in the Western Middle and Southern fields from 30 to 40 per cent, decreasing toward the west. Lykens Valley silt is particularly low in ash. Float-and-sink tests show that throughout the anthracite field it is possible to reduce the ash content of the silt to 10 or 12 per cent by rejection of 15 to 60 per cent of the raw material as refuse. The high ash content of the raw untreated silt in certain fields is accounted for by the excessive quantity of dirt that is intermixed with it in mining and not to an inherently high ash content in the coal.

The calorific value of the coal in silt banks that have stood for some time is a little lower than that of fresh-mined coal of the same ash content. This deterioration varies with the age of the bank and was over 4 per cent in the most extreme case of weathering. The coal in banks which are in use for storing silt and that have been accumulating for 5 to 10 years, has 100 to 200 B. t. u. per pound lower calorific value than fresh-mined coal samples of the same ash content from the same colliery. In banks that have been exposed for 40 years, this difference is as much as 500 B. t. u. per pound.

In normal fresh-mined silt, to which no slate has been added in the preparation plant, the finer sizes increase progressively in ash content with decrease in size so that the dust through 200 mesh, which is of suitable size for burning as powdered coal without grinding, is practically worthless because of high ash content. At most collieries where samples were taken, this product contained approximately 50 per cent ash. The only exception observed was in the extreme western part of the Western Middle Field. There the finest material in the silt samples is cleaner than the coarse sizes.

Volatile matter. Many of the high-ash fine-coal samples have an abnormally high percentage of volatile matter. (See the tables at the end of this volume). This is attributable to the presence of water of hydration in the ash-forming minerals of the sample

and does not represent the percentage of combustible volatile matter. For example, in the Buttonwood silt bank sample, the product through 200 mesh showed 13.7 per cent volatile by the standard method of determining volatile matter. The total water content, determined by the Penfield tube method, was 9.8 per cent and the moisture driven off by drying at 105° C. in the standard method for approximate analysis was only 4.9 per cent. Therefore, the sample retained 4.9 per cent of combined water that was driven off by heating to higher temperature in the volatile determination and was reported as volatile matter; deducting this amount from the per cent of volatile matter as determined gives 8.8 per cent for the actual combustible volatile matter.

Estimated yearly silt production. Estimates based on the ratio of current silt production to production of prepared coal at all the mines that were sampled in the four major divisions of the anthracite field fixes the total *annual production of silt at approximately 8,900,000 tons.*

Plants handling fresh-mined coal in the Wyoming Valley field produce about 13 per cent as much silt as prepared coal. In the Eastern Middle Field the ratio of silt to prepared coal is about 16.5 per cent, in the Western Middle Field 14 per cent, and in the Southern Field 17.5 per cent. At the collieries in the Western Middle Field where sampling was done, a comparatively large proportion of the coal was being drawn from stripping operations, and the proportion of silt may, for this reason, be lower than the average of the coal mined in this district.

Losses of fine coal in waste water. The quantity of coal lost in waste water discharged into the streams depends entirely upon the method of handling it at individual mines and has no relation whatever to geographic position or mining conditions. Furthermore, the extreme variation in conditions may be and often is found at adjacent collieries. Hence the average ratios of fine coal lost to prepared coal shipped in the different districts are of no significance when they are applied to individual collieries, but have been used only for estimating the total loss through silt-laden water discharge in the anthracite field as a whole. The law of averages and the number of observations make this estimate approximately correct.

At the collieries studied in the Northern Field the loss of fine coal in waste water discharged from the preparation plants amounted to 1.6 per cent of the quantity of coal shipped. In the Eastern Middle Field this ratio was 1.3 per cent, in the Western Middle Field is 2.7 per cent, and in the Southern Field 1.8 per cent. The total loss of fine coal in water discharged into the streams is approximately *1,150,000 tons a year.*

Screen analyses show that practically all this material is finer than the smallest of the present commercial sizes of coal and is comparatively high in ash content. At only three of the collieries which were examined was any appreciable quantity of coal of commercial size being discharged directly into the streams, and at one of these properties measures have since been taken to minimize this

loss. This survey of conditions showed that very little valuable coal is now being discarded directly from preparation plants into the streams.

Practically all the coal of marketable size which is being added to the stream deposits must be washing out of culm, silt, and rock banks that are subject to stream action or erosion in time of heavy rains and floods.

Quantity of Culm and Silt Stored in Banks in the Anthracite Region

The following table gives the quantity of culm, silt, and mixed material by fields in long tons.*

Field	Culm	Silt	Mixed	Total
Southern	37,745,000	36,815,000	10,000,000	84,560,000
Western Middle ..	43,785,000	40,735,000	17,175,000	101,695,000
Eastern Middle ...	2,430,000	6,200,000	1,385,000	10,015,000
Northern	8,125,000	8,035,000	1,795,000	17,955,000
Total for all fields	92,085,000	91,785,000	30,355,000	214,225,000

*These tonnages are not recoverable marketable coal. The material composing these banks ranges from 20 to 80 per cent combustible material.

Quantity of Culm and Silt in the Streams within the Anthracite Region

It is absolutely impossible to estimate the quantity of material in the streams in the anthracite region, but some of the larger deposits have been estimated and these estimates lead to a reasonable guess that in the streams in the anthracite region and leading from it there are accumulated at least 900,000,000 tons of material which contain enough coal to make them profitable for future recovery.

Stream Conditions in the Northern Field

“The Northern Anthracite Field extends from a point 2 miles north of Forest City to Shickshinny. It is drained by Lackawanna and Susquehanna rivers and their tributaries. . . .”

→ The Northern Anthracite Field extends from a point 2 miles north of Forest City to Shickshinny. It is drained by Lackawanna and Susquehanna rivers and their tributaries. Anthracite is mined practically continuously from one end of the field to the other. The northernmost anthracite mine is that of the Clifford Coal Company 2 miles north of Forest City on the northern outcrop of the coal beds. This colliery is now abandoned and very little silt is now accumulated in the stream between this point and Forest City. The Forest City Colliery of the Pennsylvania Coal Company is at Forest City, and it is here that the first silt pollution of the stream takes place. This colliery has been working for a great many years and has been discharging more or less silt into the stream. Very little silt is going into the river from this colliery at the present time. From Forest City southwestward Lackawanna River is never entirely free from silt.

The next source of stream pollution is the Clinton Colliery of the Hudson Coal Company. The stream is comparatively clean between Forest City and the mouth of Elk Creek. Elk Creek carries some silt from Richmondale Colliery of the Richmondale Coal Company. Southwest of the mouth of Elk Creek a considerable quantity of silt has collected in the lowlands of Lackawanna River. Through Carbondale, however, the river is clean. It is kept so by borough officials who during the summer have the fire department wash out the river bed. This keeps the river bed at its normal level and it is not abnormally raised by silt.

“No. inconvenience is caused by the silt of the Lackawanna in the vicinity of Carbondale and southward to Mayfield. . . .”

→ Several small streams flow into the Lackawanna in the vicinity of Carbondale, and each of them brings in some silt. No inconvenience is caused by the silt of the Lackawanna in the vicinity of Carbondale and southward to Mayfield. The banks are comparatively high, the river is rapid, and there is very little overflow.

Rush Brook enters the Lackawanna at Jermyn. It carries a small quantity of silt. There is no difficulty with silt accumulations in the town of Jermyn. Between Jermyn and Carbondale two collieries, Powderly and Jermyn, discharge some silt into the river. From Archbald to Peckville there are a large number of collieries, practically all of which discharge some silt into the Lackawanna. Grassy Island Creek also carries some silt into the river.

The river at Olyphant contains some silt which has been left behind when high water recedes. The same condition is true at Peckville. High water has carried a large quantity of silt into the river and has caused a number of properties to be flooded. All the small streams between Olyphant and Scranton carry some silt into the river. The water is black and deposits of silt are present throughout its entire channel. Its fall is rather rapid, and the main channel is comparatively clean.

At Scranton the South Penn Collieries Company is settling silt out of the Lackawanna and using it for filling. A large settling tank is built around a bore hole, and a low dam across the river diverts part of the stream into the settling tank. This water flows into the tank for 8 hours. It is then diverted from the tank, the bore hole is opened, and the silt which has collected is washed into

the mine. Approximately 300 tons of silt are recovered from the river in 8 hours. The river at this point carries at least 900 tons of silt in 24 hours.

Lackawanna River through the city of Scranton is nothing more than an open sewer. Private encroachments have narrowed its channel and accumulations of silt have covered a great many sewer outlets. The channel of the Lackawanna should be deepened through the city.

A great number of breakers discharge silt into the river between Scranton and Taylor. The water is heavily laden with solids and much deposition has taken place. The side streams between these two points are short, but collieries are located on all of them, and they are black with suspended material. At Taylor the whole stream bed is filled with silt but no damage is being done. From Taylor to Old Forge the river is rather rapid and cleans its bed. From Old Forge to Pittston the valley of Lackawanna River is comparatively wide and no damage has been done by the accumulation of silt. The water of the Lackawanna is very black where it enters the Susquehanna. Shallows have been built up of silt north of the city of Pittston. The Susquehanna carries much more water than the Lackawanna and has been able to keep the channel clear. Southwest of Pittston at Port Griffith a large delta is made in the river by a stream which carries the silt from Ewen Colliery of the Pennsylvania Coal Company. Between Pittston and Wilkes-Barre the valley of the Susquehanna is wide. The banks of the river are black with sticky mud which is not more than 12 inches thick. When freshets come this mud is washed down the river so that there is little accumulation of silt between these two points. A great number of collieries are located on Susquehanna River or its tributaries between Pittston and Shickshinny. Large quantities of silt are deposited in the river each year but spring freshets keep its channel clear. Some silt deposits are notable. A very large delta is formed at the mouth of Newport Creek at Nanticoke. Mill Creek, which drains Parsons, Miners Mills, and Plains carries a large quantity of silt. Mill Creek often floods and the water spreads over Hollenbeck Park. This creek does not cause any trouble between this point and the river because its banks are high.

Abraham Creek flows into the Susquehanna at Wyoming. Because it carries a large quantity of silt and has caused the borough of Wyoming some difficulty, it has been dredged out at various times. Toby Creek enters the Susquehanna at Kingston and carries into it large quantities of silt. The creek has a rapid fall and very little deposition has taken place along its banks. A small creek entering the Susquehanna between Larksville and Plymouth carries a large quantity of silt and has built up a delta into the Susquehanna.

Buttonwood Creek flows into the Susquehanna just south of Plymouth and drains a large territory south of Wilkes-Barre. It carries a large quantity of silt, it has a large flood plain, travels through territory of very little value, and causes no damage. One of its branches, Solomans Creek, often overflows and causes damage in south Wilkes-Barre. This tributary is dredged when the silt accumulates to a dangerous point.

Warrior Creek drains into the Susquehanna 1 mile southwest of Butzbach. This stream carries breaker water from a number of collieries and its flood plain is covered with layers of silt. It has flooded some fields and caused much damage. The silt in these fields is from a few inches to a foot and a half thick. Nanticoke Creek flows into Newport Creek at Nanticoke. This creek drains all of the territory between Moyer Run and Nanticoke. It carries much silt but has done very little damage. Below Warrior Run the creek crosses the middle road to Wilkes-Barre and at this point has deposited some silt. The stream is building up new banks and the silt is held in place by the vegetation growing in the shallow water. At Loomis Colliery the fields are covered with silt to a considerable depth. This is an extremely large accumulation of free silt. Where Nanticoke Creek passes under the river road between Wilkes-Barre and Nanticoke the stream conditions are bad. A flume has been built through the silt deposits to carry the water away.

Newport Creek flows into the Susquehanna at Nanticoke. It carries a very large quantity of silt. The branch which flows through the town of Wanamie carries more silt than that coming from Glen Lyon. The banks of Newport Creek are covered with silt accumulations and the bed has been built up several feet. When the water is high it spreads over a large territory and deposits much silt, especially between Nanticoke and its mouth.

From Nanticoke to Shickshinny there are no streams carrying silt into the river. Some silt is being discharged into the river at Moconagua and a delta is built up. This delta is washed away at times of high water.

The North Branch of the Susquehanna is black until it reaches Sunbury. Here it is diluted with the waters of the West Branch. Coal dredging operations are located at various points between Plymouth and the Maryland line. The damage from silt from the anthracite region is negligible.

In general the deposition of silt in the rivers of the Northern Anthracite Fields has caused very little damage. Local conditions can be remedied readily by borough or county officials. The coal companies in this field have been making some attempt to keep much of the solid material out of the streams. The discharge of mine and breaker water into the river has a beneficial effect in cleansing the stream of sewage accumulation. Much improvement has been made in settling the silt in the Northern Field in the past few years.

Silt and Culm Conditions at Collieries in the Northern Field

168. *Stackhouse Coal Company. Salem Colliery.*

Location: Mocanaqua.

Drainage: Into Susquehanna River.

The silt from this colliery is accumulated in the valley in a good settling basin which contains 200,000 tons. There is no culm bank. The rock bank is no good.

169. *West End Coal Co. Mocanaqua Colliery.*

Location: Mocanaqua.

Drainage: Into Susquehanna River.

This colliery partially settles its silt. A fairly good bank contains between 50,000 and 75,000 tons. Some of the breaker water goes into the river.

170. *Susquehanna Collieries Co. Glen Lyon No. 6 Colliery.*

Location: Glen Lyon.

Drainage: Into Newport Creek.

The breaker water is not settled, and much silt goes into Newport Creek. Some silt has been used inside the mine. The culm bank was being worked during the summer of 1925. The bank contained 1,300,000 cubic yards, April, 1925, or approximately 900,000 tons of material, of which 19 per cent is refuse.

171. *Lehigh & Wilkes-Barre Coal Co. Wanamie Colliery.*

Location: Wanamie.

Drainage: Into Newport Creek.

The breaker water goes into the mines for slushing. Some goes into the river. The breaker has settling tanks.

A culm bank contains 250,000 tons, and has not been worked.

172. *East Alden Mining Company. East Alden Colliery.*

Location: 1 mile southeast of Alden.

Drainage: Into Newport Creek.

A well-kept silt bank settles the water from this breaker. It contains 15,000 tons. There is no culm, and the rock bank has very little good coal in it.

173. *Alden Coal Company. Alden Colliery.*

Location: Alden Station.

Drainage: Into Newport Creek.

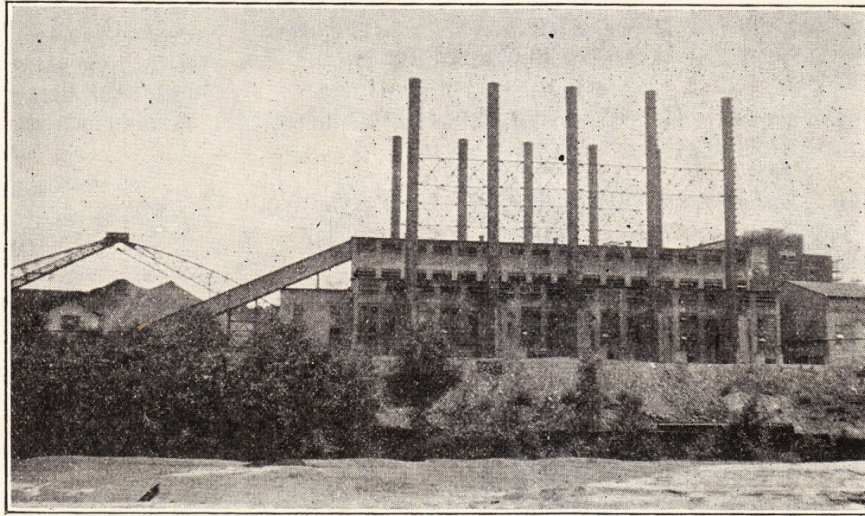
A silt bank was built up at this location from an old washery. It covers 4 acres, and contains 150,000 tons. At the new breaker the water goes directly into the stream. Some flushing has been done but this has been discontinued. The old part of the rock pile contains some good coal. The culm originated from an old dry breaker. There is less than 60,000 tons of this material.

174. *Susquehanna Collieries Company. Nanticoke No. 7 Colliery.*

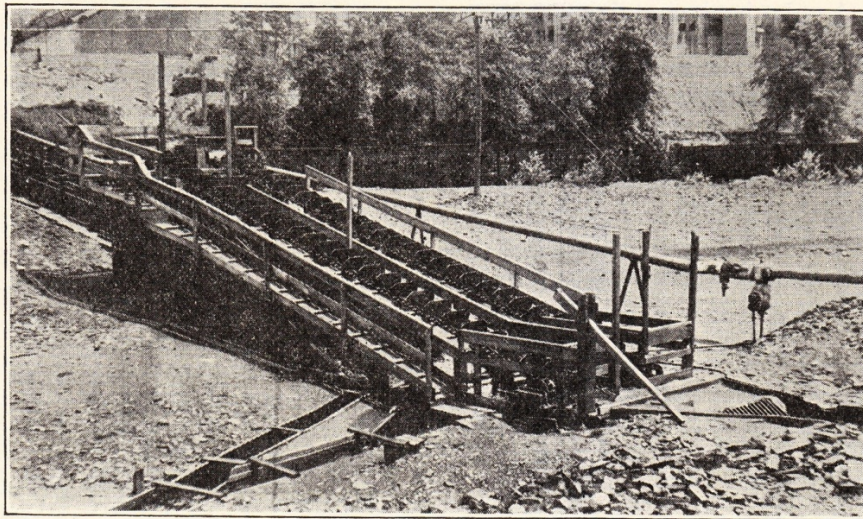
Location: Nanticoke.

Drainage: Into Newport Creek.

The culm pile contains 30,000 tons of recoverable coal. It is being worked and washed by a Chance separator. The breaker water is run out onto a 35,000 ton silt bank. The fine sizes from the culm banks are treated in a jig washery. Current silt from breaker and washery and from Glen Lyon is used in the power plant.



A. Slush-burning boiler plant, Susquehanna No. 7 Colliery, Nanticoke. This company is the leader in utilizing waste material.



B. Settling tank and scraper line for desliming silt for power plant fuel at Susquehanna No. 7 Colliery, Nanticoke.

175. *Grand Tunnel Coal Company. West Nanticoke Colliery.*

Location: West Nanticoke.

Drainage: Into Susquehanna River.

All the coal from this colliery is shipped to another breaker for preparation. The culm bank has been worked over. Approximately 60,000 tons is all that remains of an old silt bank.

176. *Geo. F. Lee Coal Company. Chauncey Colliery.*

Location: Plymouth.

Drainage: Into Susquehanna River.

The water from this breaker is well settled in a good silt bank which contains 40,000 tons. The culm bank contains 50,000 tons, is good, and is being put through the breaker.

177. *Glen Alden Coal Company. Avondale Colliery.*

Location: Avondale.

Drainage: Into Susquehanna River.

The silt bank at this colliery is well built up and the water well settled. The bank contains 200,000 tons. An old culm pile is now being worked. It was a quite large bank. An estimate was not obtained of the quantity which it contained.

178. *Glen Alden Coal Company. Auchincloss Colliery.*

Location: East end of Nanticoke.

Drainage: Into Nanticoke Creek.

The coal goes to Loomis for preparation. A large old culm bank on the property has never been worked, and appears to be good. There is also a fair-sized silt bank on the property. It probably contains 200,000 tons. An old culm bank contains approximately 300,000 tons.

179. *Glen Alden Coal Company. Bliss Colliery.*

Location: 1½ miles south of Nanticoke.

Drainage: Into Nanticoke Creek.

There is a large accumulation of silt at this colliery which is built up very well. The bank probably contains 250,000 tons. An old original culm pile has never been worked. It contains approximately 500,000 tons and looks very good.

180. *Glen Alden Coal Company. Truesdale Colliery.*

Location: Warrior Run.

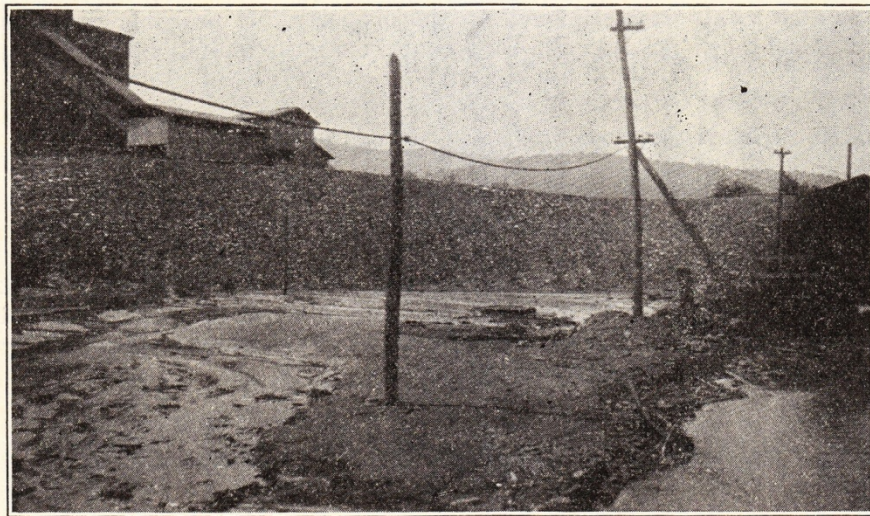
Drainage: Into Warrior Run.

The water from this breaker is fairly well settled. The silt bank contains 200,000 tons. A large, old culm bank has never been worked. It probably contains 500,000 tons. Much of it is good coal.

PLATE XXII



A. Reclaiming silt and culm hydraulically at No. 7 Colliery, Susquehanna Collieries Co., Nanticoke.



B. Silt in Newport Creek at Nanticoke. Many collieries drain water into this creek.

181. *Lehigh Valley Coal Company. Warrior Run Colliery.*

Location: Warrior Run.

Drainage: Into Susquehanna River.

The coal from this colliery is being prepared at Prospect breaker. There is no silt bank. The culm bank, which is small and nearly exhausted, is loaded into railroad cars and sold when the market permits.

182. *Glen Alden Coal Company. Loomis Colliery.*Location: $1\frac{3}{4}$ miles northeast of Nanticoke.

Drainage: Into Warrior Run.

The silt bank at this colliery is well built up, but could not be measured because entrance to the property was refused. This bank probably contains 200,000 tons. A culm pile contains 300,000 tons of fairly good material.

183. *Pittston Coal Mining Company. Hadley Colliery.*

Location: Sugar Notch.

Drainage: Into Warrior Run.

The water from this breaker is well settled. The silt bank contains 250,000 tons. The culm bank has been worked over but still contains some good coal.

184. *Lehigh & Wilkes-Barre Coal Company. Sugar Notch No. 9.*

Location: Sugar Notch.

Drainage: Into Warrior Run.

All the slush from this breaker is used inside the mine. An old culm bank has been worked over and the remaining material is of little value.

185. *Lehigh & Wilkes-Barre Coal Co. Buttonwood No. 22 Colliery.*

Location: Butzbach.

Drainage: Into Buttonwood Creek.

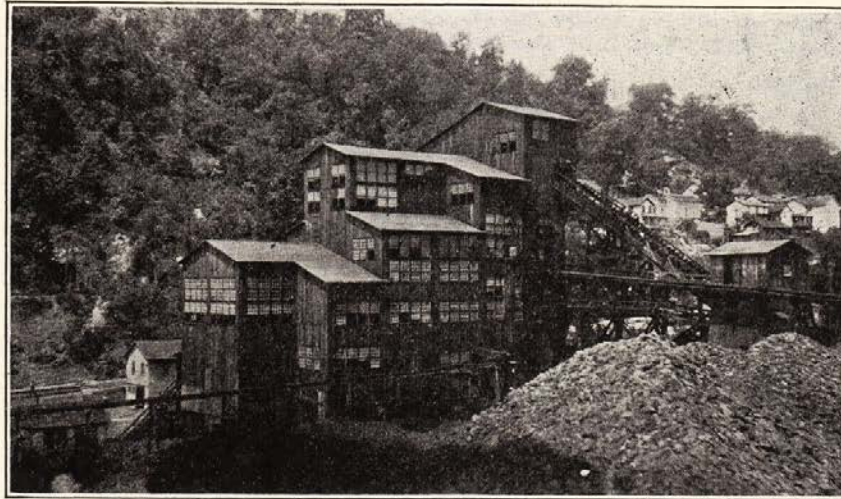
The water from this breaker spreads out over a large silt bank which is well dammed up. It contains from 150,000 to 200,000 tons. The culm bank has been worked over. The rock pile contains no good coal.

186. *Lehigh & Wilkes-Barre Coal Co. Maxwell Colliery.*

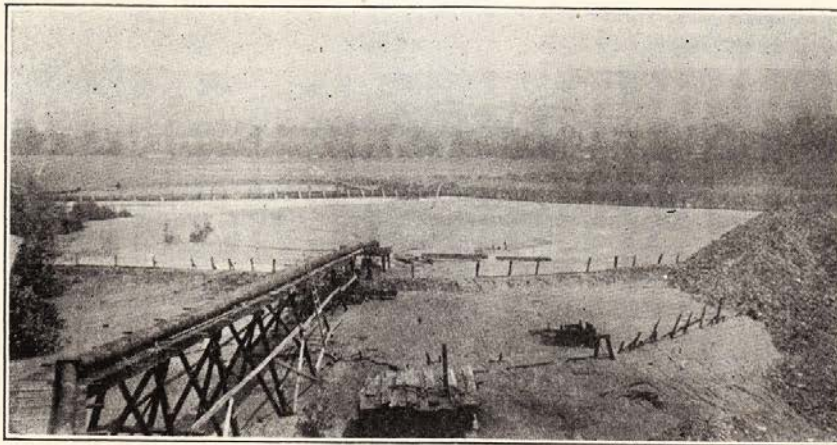
Location: Ashley.

Drainage: Into Buttonwood Creek.

All the breaker water is used inside for flushing. There is no silt bank. Very little coal goes into the stream from this breaker. The culm pile has been worked over and contains no good coal.



A. Chauncey breaker, George F. Lee Coal Co. One of the first breakers to install the Chance cone.



B. Silt bank at Chauncey Colliery showing pipe line delivering silt and water from breaker.

187. *Lehigh Valley Coal Company. Franklin Colliery.*

Location: Ashley.

Drainage: Into Buttonwood Creek.

All the water from this breaker goes back inside the mine. There is no silt accumulation on the surface. An old culm bank has been worked over and has no value. The rock pile contains no good coal.

188. *Lehigh & Wilkes-Barre Coal Co. Stanton No. 7 Colliery.*

Location: Wilkes-Barre.

Drainage: Into Buttonwood Creek.

Most of the breaker water and silt from this colliery goes back into the mine. Some goes into the creek. An old culm and silt bank contains 150,000 tons of material. The rock bank contains very little good coal.

189. *Lehigh & Wilkes-Barre Coal Co. South Wilkes-Barre No. 5 Colliery.*

Location: Wilkes-Barre.

Drainage: Into Buttonwood Creek.

There is no silt accumulation at this colliery. All the breaker water is flushed back into the mines. There is no rock or culm bank. All waste material is kept inside the mines.

190. *Plymouth Red Ash Coal Co.*

Location: Plymouth.

Drainage: Into Susquehanna River.

This is a dry breaker and there is no silt discharge. The rock is stacked and contains very little good coal. There is no culm bank.

191. *Lehigh & Wilkes-Barre Coal Co. Nottingham Colliery.*

Location: Plymouth Boro.

Drainage: Into Susquehanna River.

All silt from this breaker goes back into the mines except when the pipes are clogged and then it goes directly into the river. There is no provision for settling on the surface. A culm bank, which contains 5,000 tons, is a remnant of a large old bank.

192. *Plymouth Coal Co.*

Location: Plymouth.

Drainage: Into Susquehanna River.

This breaker is now abandoned. An old silt bank contains 5,000 tons. A culm bank, containing 10,000 tons, has been worked, but the steam sizes remain.

193. *Lehigh & Wilkes-Barre Coal Co. Lance No. 11 Colliery.*

Location: Larksville Boro.

Drainage: Into Susquehanna River.

There is no silt bank at this colliery. A large part of the water is used for silting inside. The culm bank contains 1,000,000 tons. It has been worked only a little. It is a fair bank. Silt is run over it when the silting pipes are clogged. There is no settling basin.

194. *Lehigh & Wilkes-Barre Coal Co. Hollenback Colliery.*

Location: Wilkes-Barre.

Drainage: Into Susquehanna River.

All surface refuse is now ground up and put back into the mines. The breaker water goes into the mine. There is no silt bank. A culm pile contains 100,000 tons of fair material. The rock pile contains some good coal.

195. *Sullivan & Flynn Coal Co.*

Location: Wilkes-Barre.

Drainage: Into Susquehanna River.

The breaker water goes back into the mines. There is no silt. A culm bank contains 50,000 tons. The rock pile contains no good coal.

196. *Hudson Coal Company. Baltimore No. 5 Colliery.*Location: $\frac{1}{2}$ mile east of Wilkes-Barre.

Drainage: Into Laurel Run.

Some breaker water is used inside the mine but most of it goes onto a good bank containing 150,000 tons. A good culm bank containing 200,000 tons of material has not been worked.

197. *Lehigh Valley Coal Co. Dorrance Colliery.*

Location: Wilkes-Barre.

Drainage: Into Susquehanna River.

The silt from this breaker goes back into the mine. There is no surface accumulation. All of the old culm bank has been shipped.

198. *Lehigh Valley Coal Co. Mineral Springs Colliery.*

Location: Parsons Boro.

Drainage: Into Laurel Run.

The silt goes back into the mine. Not much is wasted. All the solid waste is run through a pulverizer and flushed back in the mines. A culm bank, containing 200,000 tons, is good. It has never been worked except for boiler fuel during strikes.

199. *Hudson Coal Co. Pine Ridge Colliery.*

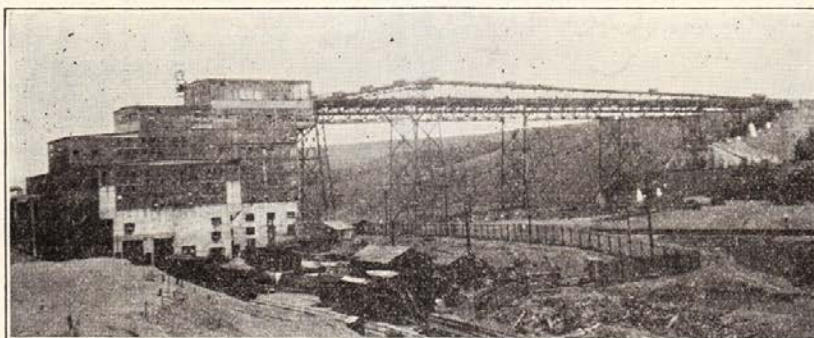
Location: Miners Mills Boro.

Drainage: Into Laurel Run.

The water from this breaker goes back into the mine where the silt is settled out. The culm bank has been worked out. A bank on Laurel Run which belongs to this property contains 250,000 tons. It is a very fine bank.



A. Hollenback Park, Wilkes-Barre, Silting by Mill Creek.



B. Butler breaker and washery, Pennsylvania Coal Co. (under construction).
A modern colliery, designed to recover all sizes of coal.

200. *Lehigh Valley Coal Co. Prospect Colliery.*

Location: Wilkes-Barre.

Drainage: Into Susquehanna River.

The silt is now being put into the mine. A culm and silt bank, containing 500,000 tons, is in good condition. This bank is old.

201. *Lehigh Valley Coal Co. Henry Clay Colliery.*

Location: Wilkes-Barre.

Drainage: Into Susquehanna River.

This colliery is a part of Prospect colliery, and is described under that name.

202. *Conlon Coal Co.*

Location: Hudson Boro.
 Drainage: Into Mill Creek.

The water from this breaker is being used to flush into the mines. Very little goes into the creek. There is no culm pile, and the rock bank contains no good coal.

203. *Central Coal Co. Wyoming Colliery.*

Location: Plains Township.
 Drainage: Into Mill Creek.

The breaker water is not settled at this colliery. It goes directly into the creek. There are no culm or silt accumulations.

204. *Colonial Colliery Co. Madeira Colliery.*

Location: Hudson.
 Drainage: Into Mill Creek.

The silt from this breaker is used for flushing inside. Very little goes into the stream. The culm pile has been loaded out. The rock bank is large but contains very little good coal.

205. *Hudson Coal Co. Laflin Colliery.*

Location: Laflin.
 Drainage: Into Mill Creek.

The silt is settled at this colliery but some of it goes into the creek. An estimate of tonnage was not obtainable. Formerly all slush and waste water was flushed into the mines.

206. *Traders Coal Co. Ridgewood Colliery.*

Location: 1½ miles southeast of Inkerman.
 Drainage: Into Mill Creek.

The breaker water is settled on a silt bank which contains 30,000 tons. The silt bank is in good condition. A mixed rock and culm bank is partly burned. It contains 200,000 tons. Some of it has been loaded but it is poor material.

207. *Hudson Coal Co. Loree No. 5 Colliery.*

Location: Larksville Boro.
 Drainage: Into Susquehanna River.

The breaker water goes into the river taking the fine-sized coal with it. A culm bank, containing 50,000 tons, has been partially worked. The rock pile contains no good coal.

208. *Kingston Coal Co. Gaylord Colliery.*Location: $\frac{1}{2}$ mile north of Plymouth.

Drainage: Into Susquehanna River.

Settling tanks at this colliery remove the silt from the waste water. The silt is used inside the mine. No rock is brought to the surface. A culm pile contains 10,000 tons.

209. *Kingston Coal Co. Kingston No. 2 Colliery.*

Location: Edwardsville Boro.

Drainage: Into Susquehanna River.

All waste products of this breaker were flushed inside the mines.

210. *Glen Alden Coal Co. Woodward Colliery.*

Location: Edwardsville Boro.

Drainage: Into Susquehanna River.

Part of the wash water goes back into the mines; some goes into the river. The rock is crushed and used inside. There is no silt bank. A culm pile, containing 50,000 tons, has been worked intermittently.

211. *Kingston Coal Co. Kingston No. 4 Colliery.*

Location: Edwardsville Boro.

Drainage: Into Susquehanna River.

There is no silt bank at this colliery. All the silt from the breaker and the washery connected with it is sent back into the mines. The rock is crushed and goes back into the mines also. The culm bank has been worked over, but approximately 100,000 tons of fine-sized materials are left.

212. *Glen Alden Coal Co. Pettebone Shaft.*

Location: Kingston.

Drainage: Into Toby Creek.

The water from this breaker is settled fairly well before it goes into the creek. Some of it is used for flushing. There are 60,000 tons of culm in a good settling basin. An old culm bank has almost all been loaded out.

213. *East Boston Coal Co.*

Location: Pringle Boro.

Drainage: Into Toby Creek.

A concrete reservoir for settling the breaker water was installed in 1925. The silt is to be used inside the mine. It formerly went into a field and then into the creek. There are two culm banks; one contains 200,000 tons, and has never been worked, except for boiler fuel. The other bank is put through the breaker. It contains 500,000 tons, and is also a good bank.

214. *Haddock Mining Co. Black Diamond Colliery.*

Location: Luzerne Boro.
 Drainage: Into Toby Creek.

All of the breaker water is used for flushing inside. The rock bank contains very little good coal. The culm bank has been loaded out.

215. *Raub Coal Co.*

Location: Luzerne Boro.
 Drainage: Into Toby Creek.

The silt from this colliery is put back inside. None goes into the stream. The culm bank has been used, and the rock pile contains only a small percentage of good coal.

216. *Temple Coal Co. Harry E. Colliery.*

Location: Swoyersville Boro.
 Drainage: Into Toby Creek.

The breaker water is well settled at this colliery, and the bank contains 250,000 tons. The waste water going to the river carries some fine solids. The culm pile has been worked over. A large rock bank contains very little good coal.

217. *Temple Coal Co. Forty Fort Colliery.*

Location: Swoyersville Boro.
 Drainage: Into Abraham Creek.

The silt from this colliery spreads out into a swamp and some of it eventually reaches the river. This swamp contains approximately 200,000 tons of silt. The culm pile has been worked over and only some fine-sized material remains, and that is of poor quality. The coal is now being prepared at Harry "E" Colliery.

218. *Lehigh Valley Coal Co. Maltby Colliery.*

Location: Swoyersville Boro.
 Drainage: Into Abraham Creek.

Some slushing is being done at this colliery, but the greater part of the breaker water is well settled in a basin which contains 50,000 tons; 150,000 tons of silt are scattered over the breaker location. The culm banks have been worked over with the exception of a small area below Maltby breaker. Approximately 50,000 tons remain.

219. *Lehigh Valley Coal Co. Westmoreland Colliery.*

Location: West Wyoming.
 Drainage: Into Abraham Creek.

All slush goes into the river. There is no settling area. None of the silt is used inside. The culm bank is very small. The rock bank is on fire.

220. *Healey Coal Co. Troy Colliery.*

Location: West Wyoming.

Drainage: Into Abraham Creek.

The silt is spread out into an adjoining field and no estimate was made of the quantity. The water runs right through the silt into the creek. The culm bank has been practically worked over. 100,000 tons of poor material remain.

221. *Temple Coal Co. Mt. Lookout Colliery.*

Location: Exeter Boro.

Drainage: Into Susquehanna River.

The breaker water is spread out over a swamp and 300,000 tons of silt is deposited there. Some of it finds its way to the river. This silt would be very hard to recover. There is no culm. The rock pile is on fire and there is very little good coal in it.

222. *Harris-Denly Coal Co. Kintz Colliery.*

Location: West Pittston.

Drainage: Into Abraham Creek.

This breaker has a good settling basin which contains 50,000 tons of silt. Not much of it is used inside. This breaker started in 1919 and has no culm.

223. *Lehigh Valley Coal Co. Exeter Colliery.*

Location: Exeter Boro.

Drainage: Into Susquehanna River.

The silt is fairly well settled on a large pile containing 200,000 tons. Some goes into the stream. The rock pile is no good and the culm has all been removed.

224. *Pennsylvania Coal Co. No. 14 Colliery.*Location: $1\frac{1}{4}$ miles northeast of Plainsville.

Drainage: Into Susquehanna River.

The breaker water goes directly into the stream without settling.

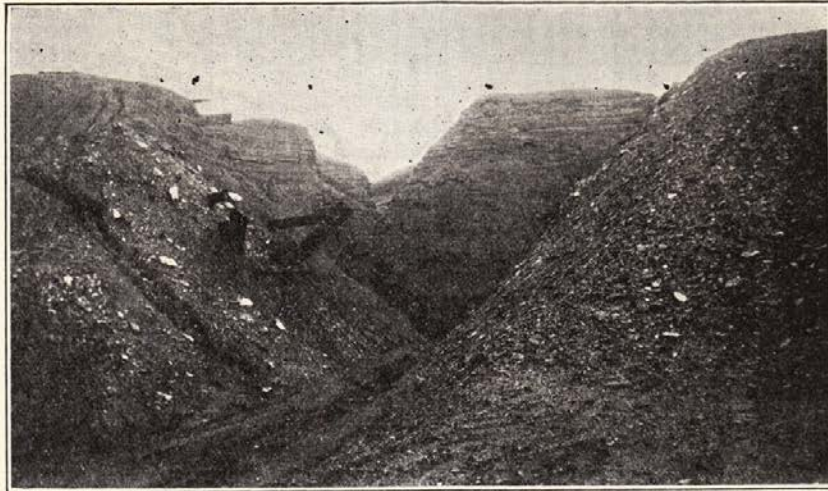
The culm banks have been worked over, but Frank Benjamin is loading some of them. Some silt, probably 150,000 tons, is scattered over the breaker property.

225. *Pennsylvania Coal Co. Inkerman No. 6.*

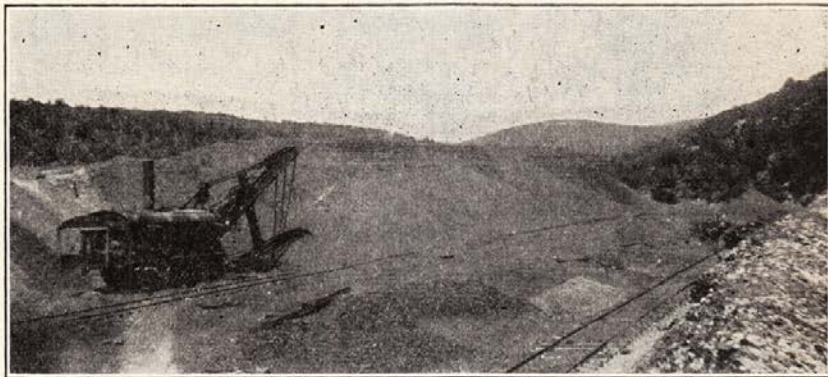
Location: Inkerman.

Drainage: Into Susquehanna River.

The silt from this colliery is well settled. The bank contains 300,000 tons. Some wash from this bank goes into the river. The culm pile has been worked over three or four times, and that remaining has no value.



A. Ravines in old bank at No. 6 Colliery, Pennsylvania Coal Company. Erosion works havoc on old unprotected banks.



B. Steam shovel in position to load silt at Edgerton Colliery, Temple Coal Co.

226. *Pennsylvania Coal Co. Ewen Colliery.*

Location: Port Griffith.

Drainage: Into Susquehanna River.

This colliery was inaccessible when visited because of a strike. The breaker water goes into the river.

227. *Hillside Coal & Iron Co. Butler Colliery.*

Location: In Pittstown Township near Dupont.

Drainage: Into Susquehanna River.

The silt from this colliery is well settled. The bank contains 400,000 tons. Some of this bank is washing away during periods

of heavy rains and floods. The culm bank containing 100,000 tons is now being worked by leasing companies. Most of the silt is now flushed into the mine and all of it will be after breaker construction is completed.

228. *Pennsylvania Coal Co. No. 9 Colliery.*

Location: 1 mile northeast of Pittston.
Drainage: Into Susquehanna River.

229. *Lehigh Valley Coal Co. Seneca Colliery.*

Location: Pittston.
Drainage: Into Susquehanna River.

This colliery is trying to save the silt. A good, large silt bank containing 200,000 tons is well dammed up. The culm bank has been worked over. The old Phoenix bank is gone and the Columbia bank is being worked.

230. *Glen Alden Coal Co. Hallstead Colliery.*

Location: Duryea.
Drainage: Into Lackawanna River.

There is no silt bank at this colliery. The water goes directly into the river. An old culm bank has been burned. Some of it is being carted to Diamond washery. A culm bank contains approximately 200,000 tons of material. Formerly the waste water from the breaker drained directly to Lackawanna River, but the washery slush was pumped to a bank.

231. *Suffolk Anthracite Collieries Co. Avoca Colliery.*

Location: Avoca.
Drainage: Into Lackawanna River.

There is no silt accumulation at this breaker. The water goes directly into the river. Some flushing is done down a bore hole. There is no culm and the rock pile contains no good coal.

232. *Lehigh Valley Coal Co. Heidelberg Colliery.*

Location: Avoca.
Drainage: Into Lackawanna River.

The breaker water from this colliery is well dammed up and the silt bank contains 250,000 tons. The water is well spread over the bank before it seeps through the edges. The culm bank has been worked over.

233. *T. F. Quinn Coal Co. Consolidated Colliery.*

Location: Avoca.
Drainage: Into Lackawanna River.

The silt bank is well banked up and contains 200,000 tons. The culm bank has been worked over and no good coal remains. The bank belongs to Scranton Electric Company.

234. *Pennsylvania Coal Co. Central Colliery.*

Location: 1 mile south of Old Forge.
 Drainage: Into Lackawanna River.

There is no silt bank at this colliery. The water goes directly into the river. The culm bank is worked over and contains no good coal. Formerly the silt was flushed into the mine through a bore hole.

235. *Powell-Jennings Coal Co. Rocky Glen Colliery.*

Location: Rocky Glen Park, 1 mile southeast of Moosic.
 Drainage: Into Lackawanna River.

The drainage from this colliery goes direct to Lackawanna River without settling. The rock pile contains some good coal. There is no culm pile.

236. *Pennsylvania Coal Co. Old Forge Colliery.*

Location: At Old Forge.
 Drainage: Into Lackawanna River.

The breaker water is not settled. It goes directly into the river. The old culm bank has been washed and no coal remains. Formerly all the waste water was used for flushing inside the mine.

237. *Jermyn & Company. Jermyn Colliery.*

Location: Old Forge.
 Drainage: Into Ascension Brook.

The breaker water goes directly into Ascension Brook. There is no silt bank. The culm bank has been worked over and the refuse contains no good coal. The rock pile is also barren of coal.

238. *Dennington Washery.*

Location: Old Forge.
 Drainage: Into Ascension Brook.

This washery is working over the old Sibley dump. It contains 100,000 tons. A large quantity of good coal is being obtained. The wash water goes directly into Ascension Brook.

239. *Scranton Anthracite Coal Co. Oak Hill Colliery.*

Location: Minooka.
 Drainage: Into Lackawanna River.

The water is fairly well settled in a basin. Some silt goes into the river. The rock pile contains no good coal. There is no culm bank.

240. *Glen Alden Coal Co. Taylor Breaker.*

Location: Taylor.
 Drainage: Into Lackawanna River.

There are no facilities for settling the breaker water at this breaker. It goes directly into the stream. The culm bank has been worked over and the refuse contains very little coal. There is no coal in the rock pile.

241. *Hudson Coal Co. Greenwood Colliery.*

Location: Minooka.

Drainage: Into Lackawanna River.

The water is settled on a bank, and some goes into the Lackawanna. A culm bank on this property is large, but no estimate of its tonnage could be made. The silt was formerly sent to Marvine for preparation.

242. *W. Y. Moffat Coal Co. Carleton Colliery.*

Location: 1 mile east of Minooka.

Drainage: Into Stafford Meadow Brook.

The water from this colliery seeps through old workings into the Lackawanna. Some silt is discharged. There is no equipment for recovering silt. There is no culm, and the rock pile contains no good coal.

243. *Black Diamond Washery.*

Location: 1 mile east of Taylor.

Drainage: Into Lackawanna River.

Working old Diamond culm pile, which contains 50,000 tons. The silt is settled fairly well in a pond containing 20,000 tons.

244. *John Gibbons Coal Co. Gibbons Colliery.*

Location: At south Scranton city line.

Drainage: Into Lackawanna River.

This is a stripping operation. The rock pile contains some good coal. There is no culm bank. The silt is fairly well settled on a bank. Some goes into the river.

245. *Glen Alden Coal Co. Pine Colliery No. 7.*

Location: Taylor.

Drainage: Into Ascension Brook.

The water from this breaker goes down the creek. No attempt is made to settle it and there is no silt bank. An old culm pile has been worked over and now contains no good coal.

246. *Glen Alden Coal Co. Archbald Colliery.*

Location: Taylor.

Drainage: Into Ascension Brook.

The breaker water is settled in a tank, and the silt scraped onto a bank. Some silt goes into the river. There is at least 300,000 tons of silt in the basin. The old culm pile has been worked over. The rock bank contains some good coal and may be workable in the future.

247. *Glen Alden Coal Co. Continental Colliery.*

Location: 1 mile north of Hyde Park.

Drainage: Into Lackawanna River.

This mine is on fire. A culm bank has been formed by loading out the partly burned coal. No estimate of the tonnage was made. Formerly this breaker was dry and there was no drainage to Keyser Creek nor was any mine water pumped out of the workings.

248. *Glen Alden Coal Co. Baker Colliery.*

Location: Hyde Park.

Drainage: Into Lackawanna River.

The silt from this breaker is settled. The silt bank contains approximately 300,000 tons. The culm pile has been worked over. The rock pile contains 2 to 3 per cent of good coal.

249. *Peoples Coal Co. Oxford Breaker.*

Location: Scranton.

Drainage: Into Lackawanna River.

The breaker water is not settled, and goes directly into the river. The culm pile has been worked over and contains very little good coal. The rock bank contains no good coal.

250. *Glen Alden Coal Co. Hyde Park Colliery.*

Location: Hyde Park.

Drainage: Into Lackawanna River.

This breaker has a settling tank. Some silt goes into the river when the tank overflows. The silt is mixed with barley coal and is used in the boiler plant. There is no culm on the property.

251. *Scranton Coal Co. Capouse Colliery.*

Location: 1½ miles north of central Scranton.

Drainage: Into Lackawanna River.

The coal is prepared at Dickson City. A pile of silt and culm containing approximately 70,000 tons has been worked over once but another attempt is being made to work it. Some of this material is being washed into streams during floods.

252. *Glen Alden Coal Co. Diamond Colliery.*

Location: Scranton.

Drainage: Into Lackawanna River.

At this colliery the breaker water is settled in a settling pool. The writer was not allowed access to the property and no estimate could be made of the quantity of silt there. A large culm bank has been worked but still contains some good coal. The rock pile contains no good coal.

A washery is taking culm from the culm pile of Diamond Colliery. They have a fairly well built up settling area which contains 50,000 tons of silt.

253. *Lackawanna Fuel Co. Ransome Colliery.*

Location: 2 miles northwest of Hyde Park.

Drainage: Into Lackawanna River.

No culm or silt is accumulated at this locality.

254. *Mid City Coal Co.*

Location: In Scranton between Hyde Park and Providence.

Drainage: Into Lackawanna River.

No culm or silt deposit. All loaded out for lack of storage space.

255. *South Penn Collieries Co. Von Storch Colliery.*

Location: Scranton.

Drainage: Into Lackawanna River.

The wash water from this colliery goes directly into the creek and the fine sizes are wasted. Some of the silt is used for inside flushing. The culm pile is small and partially worked. 25,000 tons of unworked material remain. The rock pile contains no good coal.

256. *Providence Coal Co.*

Location: Providence.

Drainage: Into Lackawanna River.

This colliery gets its coal from Brisbin culm banks. No provision is made for settling the wash water and all the fine sizes go into the creek.

257. *Scranton Coal Co. West Ridge Colliery.*

Location: Scranton.

Drainage: Into Lackawanna River.

This colliery has no surface rights and the refuse is hauled away.

258. *Legitts Creek Anthracite Co. Legitts Creek Colliery.*

Location: Scranton.

Drainage: Into Lackawanna River.

The silt from this colliery has been used for flushing. Some of it goes into the river. The culm pile has been worked over. The rock pile is large but there is no good coal in it.

259. *Hudson Coal Co. Marvine Colliery.*

Location: In the northeast end of Scranton.

Drainage: Into Lackawanna River.

This breaker is using a Dorr thickener for its wash water. The drainage water goes into Lackawanna River, and at times it looks very black. The rock pile has no good coal in it. There is no culm which is accessible.

260. *Scranton Coal Co. Richmond No. 3 Colliery.*

Location: Scranton.

Drainage: Into Lackawanna River.

The breaker at this colliery has been torn down. There is no surface accumulation except a small rock pile which contains no good coal.

261. *Hudson Coal Co. Manville Colliery.*

Location: Scranton.

Drainage: Into Lackawanna River.

The coal from this shaft is now taken to Marvine colliery and the breaker has been torn down. The old culm and silt bank has been worked over and the remains of it have little value.

262. *Green Ridge Coal Co. Green Ridge Slope.*

Location: In central Scranton.

Drainage: Into Lackawanna River.

This breaker has been abandoned and the old dump is being used by the Scranton Light and Power Company. It is practically all used.

263. *Scranton Coal Co. Mt. Pleasant Colliery.*

Location: Scranton.

Drainage: Into Lackawanna River.

This is a dry breaker. Everything is shipped. Loose silt goes back into the mines. The rock is walled up inside the mine. The culm pile has been partially worked over. 50,000 tons remain.

264. *Scranton Coal Co. Pine Brook Colliery.*

Location: Scranton.

Drainage: Into Lackawanna River.

All the breaker water is used for inside flushing. An old culm bank has been partly worked and partly burned. About 35,000 tons remain and it contains much good coal.

265. *Roaring Brook Coal Co. Roaring Brook Colliery.*

Location: South end of Dunmore Boro.

Drainage: Into Roaring Brook.

No coal is prepared here now. There is no silt or culm.

266. *Reichter Coal Co.*

Location: South of Dunmore Boro.

Drainage: Into Roaring Brook.

No attempt is being made to settle the silt from this small colliery. There is no culm and the rock dump contains no good coal.

267. *Pennsylvania Coal Co. Pennsylvania No. 5 Colliery.*

Location: Dunmore.

Drainage: Into Roaring Brook.

There is no accumulation of silt on the outside. The culm has been worked over and the rock pile contains no good coal.

268. *Carney & Brown Coal Co.*

Location: Dunmore Boro.

Drainage: Into Roaring Brook.

This breaker is dry, and the Scranton Electric Company buys up all the small size coal, silt included. There is no culm bank and the rock pile contains a very small percentage of coal.

269. *Pennsylvania Coal Co. Pennsylvania No. 1 Colliery.*

Location: Dunmore Boro.

Drainage: Into Lackawanna River.

Some of the silt from this breaker is used inside the mine. The remainder is drained out onto a bank which contains 250,000 tons. Some of the silt goes into the river. The culm bank was used during the war.

270. *Meadowside Coal Co.*

Location: Dunmore Boro.

Drainage: Into Roaring Brook.

This is a dry breaker. There is no silt or culm accumulation. The Scranton Electric Company buys all the small sizes. The rock pile is no good; even bone is ground up and sold.

271. *Spencer Coal Co. Spencer Colliery.*

Location: Dunmore Boro.

Drainage: Into Roaring Brook.

The silt from this breaker is well settled on a bank which contains 150,000 tons. A culm bank containing 100,000 tons looks good, and a small cut has been made in it.

272. *Nay Aug Coal Mining Co.*

Location: Dunmore Boro.

Drainage: Into Roaring Brook.

The water from this breaker is well settled on a bank. It contains from 75,000 to 100,000 tons. There is no culm bank, and the rock pile contains very little good coal.

273. *Pennsylvania Coal Co. Underwood Colliery.*

Location: 2 miles northeast of Dunmore Boro.

Drainage: Into Lackawanna River.

The slush from this breaker is filling in a big swamp which probably contains 300,000 tons. There is no culm and the rock bank contains 2 to 3 per cent coal.

274. *Price Pancoast. Pancoast Colliery*

Location: Throop.

Drainage: Into Lackawanna River.

No culm or silt deposit at this colliery.

275. *Glen Alden Coal Co. Storrs Colliery.*

Location: Dickson City.

Drainage: Into Lackawanna River.

The silt from this breaker was used by the Scranton Anthracite Briquet Co., which has ceased operating. Probably 100,000 tons of silt remain. All the water goes directly inside for flushing but is still black when it is pumped into the river.

276. *Scranton Coal Co. Johnson Colliery.*

Location: Dickson City.

Drainage: Into Lackawanna River.

The silt from this breaker is being used for flushing. The water is pumped out again into the river. A small culm pile is being used for boiler fuel. The rock pile probably contains 2 to 3 per cent coal.

277. *Hudson Coal Co. Eddy Creek Colliery.*

Location: Olyphant.

Drainage: Into Lackawanna River.

No coal is being prepared at this breaker. The water formerly went into Lackawanna River and no attempt was made to settle it. An old culm bank, partly burned, has been partly worked. A large quantity remains, probably 300,000 tons.

278. *Hudson Coal Co. Olyphant Colliery.*

Location: Olyphant.

Drainage: Into Lackawanna River.

The wash water is used for flushing inside the mines. When it is not needed some of it goes into the river. There is no culm pile, and the rock bank contains only 2 to 3 per cent of coal.

279. *Lackawanna Collieries Co. Lackawanna Colliery.*

Location: Peckville.

Drainage: Into Lackawanna River.

This is a dry breaker and the coal is washed in railroad cars. All the silt goes directly into Lackawanna River. There are 450,000 tons of culm. Much of it is burned over and mixed with ashes.

280. *Scranton Coal Co. Ontario Colliery.*

Location: Peckville.

Drainage: Into Millers Creek.

The silt from this breaker is well stored. There are 150,000 tons of good material in the bank. A 200,000 ton bank of fine coal mixed

with rock is leased to the Barton Coal Co. The waste water carries some coal into the creek and the bank run-off water is not well clarified.

281. *Scranton Coal Co. Raymond Colliery.*

Location: Peckville.

Drainage: Into Lackawanna River.

Coal from Raymond colliery is being shipped run-of-mine to Ontario breaker. The small culm and silt accumulations are combined with Rhondda Colliery.

282. *Radiant Coal Co. Rhondda Colliery.*

Location: $\frac{1}{4}$ mile northwest of Winton.

Drainage: Into Lackawanna River.

The silt at this colliery is fairly well settled. A large bank is gradually being built up and contains approximately 150,000 tons. It is being worked intermittently. The culm bank, which contains 200,000 tons, was being worked in 1925.

283. *Scranton Coal Co. Riverside Colliery.*

Location: 1 mile southwest of Archbald.

Drainage: Into Lackawanna River.

The silt is being partly recovered at this colliery and 30,000 tons have accumulated. There is no culm pile and the rock bank contains no good coal.

284. *Humbert Coal Co. Sunnyside Colliery.*

Location: 2 miles east of Sterrick Creek Colliery, and $1\frac{1}{2}$ miles east of Jessup.

Drainage: Into Grassy Island Creek.

The slush from this breaker is being accumulated in a small well-built-up bank, but settlement is not very effective and a considerable quantity of fine silt is carried into the stream. A small culm pile, containing 50,000 tons, looks good, and is not being worked.

285. *Temple Coal Co. Sterrick Creek Colliery.*

Location: Jessup.

Drainage: Into Grassy Island Creek.

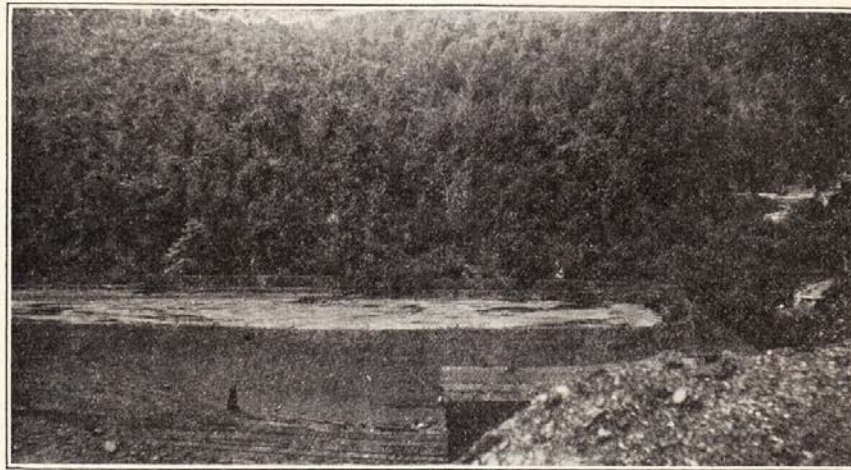
No silt is being accumulated at this colliery. The water goes directly into the stream or is used underground. The culm bank is on fire and it is impossible to estimate its tonnage.

286. *Mt. Jessup Coal Co. Mt. Jessup Colliery.*

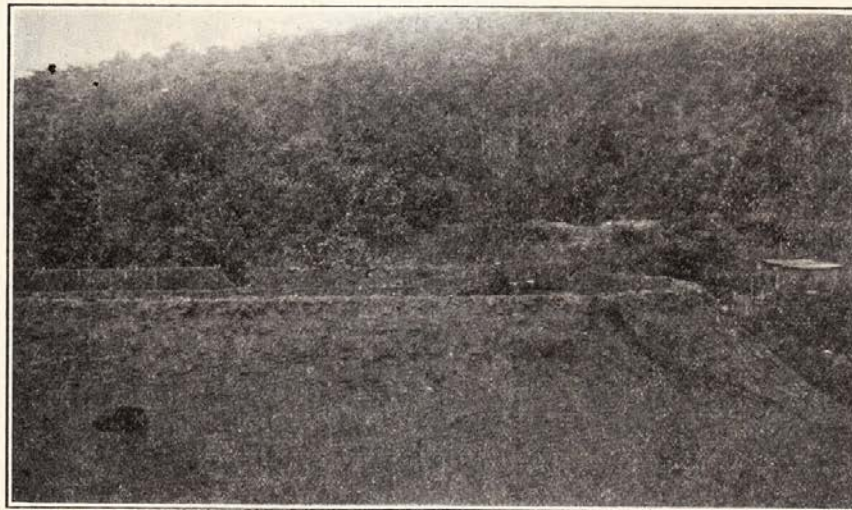
Location: Jessup.

Drainage: Into Lackawanna River.

This colliery uses all the silt inside. There is no culm.



A. New bank at Sunnyside Colliery. An ideal settling bank. Note boards in position as retainers.



B. Sunnyside Colliery, Humbert Coal Co. New silt bank. The hole in the lower left corner is where a sample was taken.

287. *Winton Coal Co. Winton Colliery.*

Location: Jessup.

Drainage: Into Lackawanna River.

The water from this colliery goes directly into Lackawanna River, and there is no silt accumulation. The culm bank has been partly worked and 200,000 tons remain.

288. *Suffolk Anthracite Collieries Co. Rose Washery.*

Location: Jessup.

Drainage: Into Grassy Island Creek.

This washery prepares coal for other companies. The silt is not collected. This property has a culm bank containing 150,000 tons.

289. *Hudson Coal Co. Gravity Slope Colliery.*Location: $\frac{3}{4}$ mile south of Archbald.

Drainage: Into Lackawanna River.

The silt is being settled on a bank but some of the water goes into the river before it is thoroughly settled. This bank contains 150,000 tons. A washery is connected with the colliery and all fines are recovered. A very rich culm pile containing 175,000 tons is not being worked, although thousands of tons have been shipped from it. The culm came from the old dry breaker from coal which was mined many years ago.

290. *Suffolk Anthracite Collieries Co. Tappan Colliery.*Location: $1\frac{1}{2}$ miles northeast of Archbald.

Drainage: Into White Oak Run.

There is no silt or culm at this breaker. The water goes directly into the stream. The rock pile contains no good coal. Formerly slush and waste water were flushed to a bank surrounded by rock. This bank drained back into the mine.

291. *Hudson Coal Co. Jermyn Colliery.*

Location: Jermyn.

Drainage: Into Lackawanna River.

This breaker is not being used. Formerly the silt was flushed into the mines. A washery was operated at this colliery and prepared thousands of tons of culm for the market. Approximately 200,000 tons of culm are left. A silt bank containing at least 200,000 tons is still intact.

292. *Ammerman Coal Co. Fireside Colliery.*

Location: 1 mile northwest of Jermyn.

Drainage: Into Rush Brook.

The coal is shipped run-of-mine, and no silt is being produced. The rock pile accumulated when the breaker was running contains no good coal. There is no culm.

293. *Hillside Coal & Iron Co. Erie Colliery.*Location: $\frac{3}{4}$ mile southwest of Carbondale.

Drainage: Into Lackawanna River.

This colliery is shipping coal run-of-mine to Dunmore. There was once a large culm pile here but it has been worked over and only a part of it remains. This part is now being worked. Silt is not being produced.

294. *Hudson Coal Co. Powderly No. 2 Colliery.*

Location: $\frac{1}{2}$ mile southwest of Carbondale.
 Drainage: Into Lackawanna River.

Formerly the silt from this breaker, which is wet, was pumped back into the mines, but now the silt is allowed to drain directly into Powderly Creek. The culm and rock banks are being washed at the breaker. Approximately 200,000 tons of this material remain.

295. *Sunrise Coal Co. Sunrise Colliery.*

Location: On Fall Brook $\frac{1}{2}$ mile northwest of Carbondale.
 Drainage: Into Fall Brook.

No coal is prepared at this mine and it was not visited.

296. *Fallbrook Coal Co. Fallbrook Colliery.*

Location: 1 mile northwest of Carbondale.
 Drainage: Into Fall Brook.

The breaker water goes directly into the stream, and the silt does not accumulate. The culm pile has been worked over, and the rock bank contains no good coal.

297. *Lackawanna Coal Corp. Falls Colliery.*

Location: $1\frac{1}{2}$ miles northwest of Carbondale.
 Drainage: Into Fall Brook.

This is a small operation and there is no accumulation of culm or silt.

298. *Suffolk Anthracite Collieries Co. Boland Colliery.*

Location: 1 mile south of Carbondale.
 Drainage: Into Powderly Creek.

The silt from this breaker is not settled. Formerly it went into a swamp, but this swamp is now filled and the water goes directly into the creek. The culm has been loaded out.

299. *Racket Brook Coal Co. Racket Brook Colliery.*

Location: 1 mile east of Carbondale.
 Drainage: Into Lackawanna River.

The breaker water goes directly into the stream. There is no culm or silt, and the rock pile contains no good coal.

300. *Hudson Coal Co. Coal Brook Colliery.*

Location: Carbondale
 Drainage: Into Lackawanna River.

The breaker water goes directly into the river and no attempt is made to settle the silt. The large culm pile, which has never been worked, contains 225,000 tons of material. The rock pile contains no good coal.

301. *Murray Coal Co. Murray B Colliery.*

Location: 1½ miles northeast of Carbondale.

Drainage: Into Lackawanna River.

The breaker water goes directly into the stream. There is no silt bank or culm pile. The rock bank contains no good coal.

302. *Suffolk Anthracite Collieries. Nay Aug No. 2 Colliery.*

Location: East bank of Lackawanna River, 2 miles north of Carbondale.

Drainage: Into Lackawanna River.

The breaker water goes directly into the river. No silt is settled. An old culm bank has been worked over and contains very little coal. The rock bank contains no good coal.

303. *Wilson-Hill Coal Co. Franklin Colliery.*

Location: 2 miles northeast of Carbondale.

Drainage: Into Elk Creek.

The breaker water goes directly into the stream. There is no silt bank. The rock pile contains no good coal. An old culm pile has been worked over but some coal may be gotten out of it. The contents of this bank are problematical.

304. *Richmondale Coal Co. Richmondale Colliery.*

Location: 2 miles southwest of Vandling.

Drainage: Into Elk Creek.

The wash water goes directly into the stream and is not settled. There is no culm pile and the rock bank contains no good coal.

305. *Temple Coal Co. Northwest Colliery.*

Location: 3 miles east of Carbondale.

Drainage: Into Lackawanna River.

The breaker water goes directly into the stream. No attempt is made to settle it, therefore there is no silt. The rock pile contains no coal, and the old culm bank has been worked over.

306. *Red Haven Coal Co. East Side Mine.*

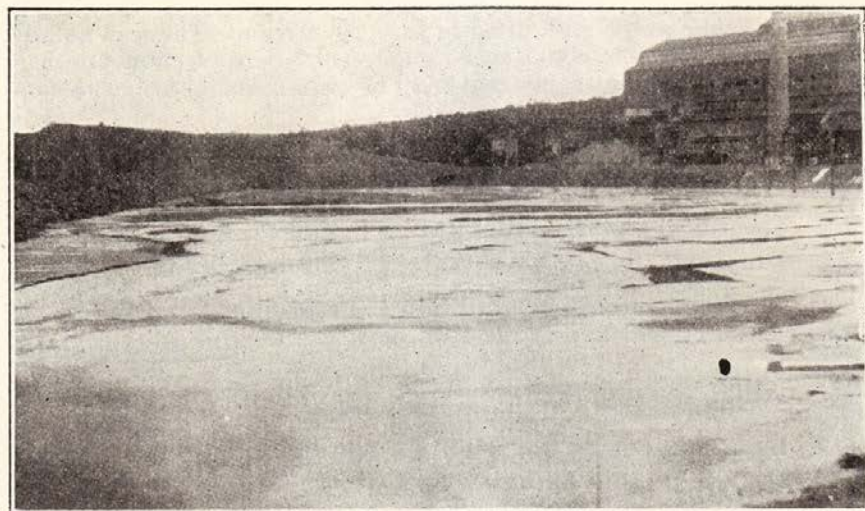
Location: East bank of Lackawanna River, 2 miles north of Carbondale.

Drainage: Into Lackawanna River.

This is a very small dry breaker which works intermittently and has very little discharge.



A. Forest City breaker and silt flume. To illustrate how silt is delivered to a silt bank.



B. Lower silt basin at Underwood Colliery, Pennsylvania Coal Co., looking toward silt delivery end from roadway. The water spreads over the entire bank.

307. *Hudson Coal Co. Clinton Colliery.*

Location: At Vandling, midway between Forest City and Carbondale.

Drainage: Into Lackawanna River.

This breaker has a large silt bank containing 100,000 tons. It is well built up with dry silt and very little fine-sized coal goes into the river. All sizes below pea coal are run through a washery at the colliery. There is no culm bank.

Formerly, much of the silt was used for inside flushing, and the material which was not used went over an improvised slush bank directly into the river. The rock bank contains no good coal.

308. *Hillside Coal & Iron Co. Forest City No. 2 Colliery.*

Location: Forest City.

Drainage: Into Lackawanna River.

This breaker has a silt bank containing approximately 100,000 tons. It was originally run into a depression. This depression is now filled and the bank is being well built up as the silt accumulates. Very little silt goes into the river. A washery is attached to the breaker and all the fine sizes are recovered. The rock pile contains no good coal. There is no culm bank.

309. *Clifford Coal Co. Clifford No. 1.*

Location: 2 miles north of Forest City.

Drainage: Into Lackawanna River.

This breaker is abandoned. The coal is prepared at Moosic. There are no silt or culm accumulations. Formerly a washery known as the Clifford Washery of the Pennsylvania Coal Company was located near this site. The slush from this washery was discharged into a depression from which an old culm bank had been removed. This accumulation of silt also has been removed.

RIVER AND CREEK COAL

The three rivers draining the anthracite fields, the Susquehanna, Schuylkill, and Lehigh, have been carrying away thousands of tons of combustible material annually for over a hundred years. When anthracite mining was in its infancy there was no demand for small sizes. The steam sizes which are now so popular were piled outside the mines and were gradually washed into the streams. In addition to these steam sizes, pea and nut coal were often discarded. These accumulations were the basic source of river coal. Anthracite was first prepared dry. Later in the growth of the anthracite industry, water was used for preparing the coal and enormous quantities of domestic sizes were washed directly into the streams through the medium of breaker water discharge. Twenty years ago the streams of the anthracite region contained millions of tons of coal. These accumulations and the accumulations on breaker properties have gradually been worked over and are disappearing. Some old culm banks belonging to "Company" coal producers have not been reworked but these banks have been overgrown by tough grass, weeds, and small trees which find sufficient food in the piles to grow prolifically. This vegetation protects these old piles. During times of high water the creeks run over the top of silt and culm accumulations. The greatest migration of coal takes place during freshets. Large accumulations of silt disappear down the creeks during one freshet. New bars are built up from material which is washed down from above. Conditions are changing however, and there is very little doubt that the river coal industry will eventually cease.

History. Before 1890 the accumulations of silt along the creek and river banks were worked only by private individuals who shoveled up enough of the best and largest material for use in their stoves. The first operations on a commercial scale were in the vicinity of Harrisburg. A short time later operations were started near Sunbury. The first recorded appreciable production of river coal was in 1891 when sand and gravel producers reported production of river coal as a by-product of their other business. For 15 years the river coal industry was sporadic, and very small quantities were removed for use in nearby communities. There was little demand for the product because bituminous coal was cheap and residences and commercial plants were not equipped with the grates and blowers necessary for burning the fine coal.

Domestic sizes recovered from the creeks before they left the anthracite region were sold to householders for \$2.00 a ton. The smaller sizes brought 50 to 75 cents a ton.

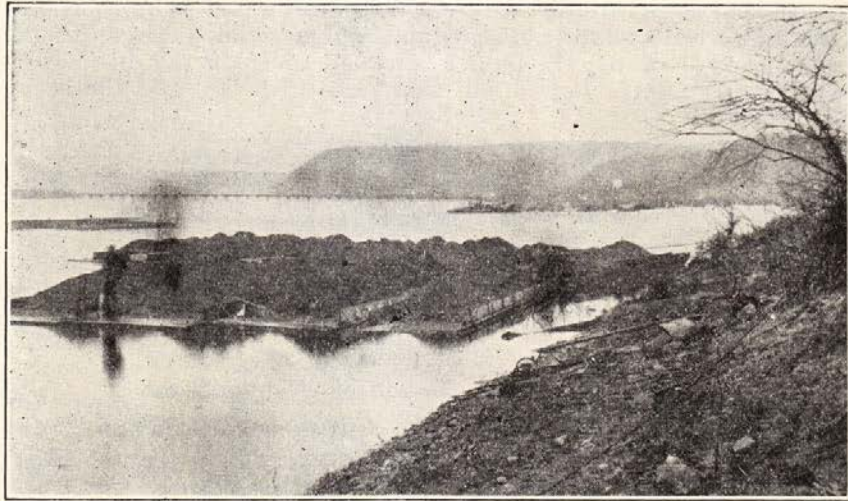
From 1905 to 1910 river coal gained in popularity on the Susquehanna and power companies began to use it in their plants. The production grew and in 1913, 260,000 tons were produced. The price ranged from \$1.00 to \$1.25 per ton; \$3.00 to \$3.50 was charged for domestic sizes.

Migration and accumulation of river coal. River coal is separated from sand and gravel by Nature which uses the well-known physical fact that when a mixture of heavy and light material is moved through the agency of water, the lighter material, which in this instance is coal, moves faster. Deposition takes place with the sand and heavy

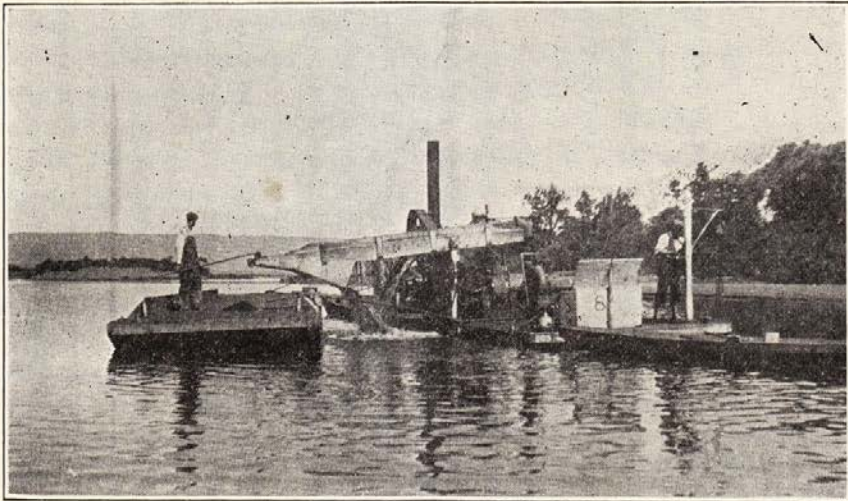


FIGURE 19
Occurrence of River and Creek Coal.

material such as bone on the bottom, and relatively pure coal on top. Many factors cause variation in this general law. The larger pieces of coal, of course, move much more slowly than the smaller pieces. Most of the larger pieces are recovered in the creeks before they reach the river. The small pieces move onward and form bars and shoals in the rivers and creeks. The very finest of the material



A. River coal on flat boats above Harrisburg. Waiting to be towed to unloading dock.



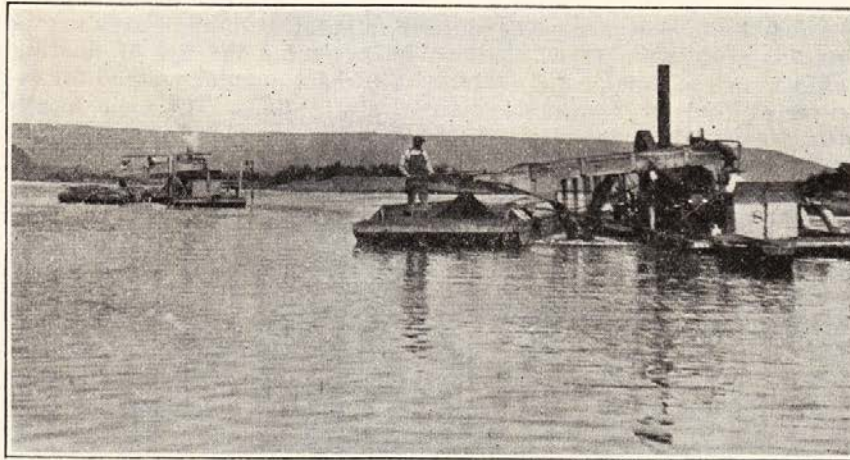
B. Mechanical separation of the coal from sand and water.

is suspended in the water and is carried rapidly to the sea. Small particles of coal can be seen in the waters of the Susquehanna at Havre de Grace, Maryland. Ice cakes in that locality contain pieces of anthracite.

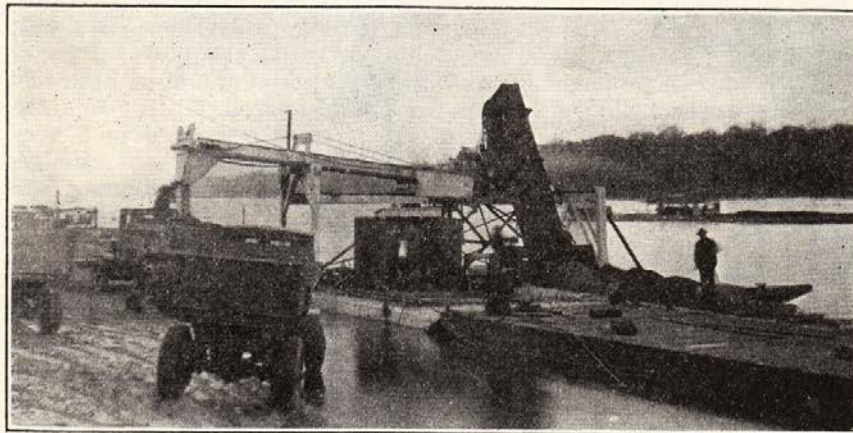
The travel and accumulation of river coal is not constant. The coal is deposited where the current is sluggish. Freshets scour out new channels and the swifter water changes its course. The same material may be moved from side to side in a stream valley without much forward movement. On the other hand a bar may be lifted entirely and moved down the stream by high water and ice. Com-

paratively large sand bars disappear completely in two or three days and new ones are built up. Observations of a coal and sand bar in the vicinity of Heckton, Dauphin County, indicate that it moved southward three miles in one year. This coal bar was composed of material 50 per cent of which passed through $3/32$ inch round mesh screen. This is approximately the average size of the

PLATE XXIX



A. River coal dredge and stern wheel steamer at Harrisburg.



B. Unloading river coal from flat boat by mechanical digger and delivery to truck, near Harrisburg.

anthracite which is being recovered from the river at Harrisburg. At the rate of movement of three miles in one year, it would take the coal 20 years to move from Lykens to Harrisburg, and 30 years from Shamokin to Harrisburg. This assumes, of course, that the rate of movement is constant. The coal would move faster on the creeks in which it originates because the current is swifter. Some coal bars in the Susquehanna do not move for several years. Others move very rapidly. After careful thought and consideration of all

the factors which are involved, it is reasonable to believe that river coal of average size or approximating that of No. 4 buckwheat which passes a $3/32$ inch round mesh screen, will move between 2 and 3 miles a year. The finer material will move more rapidly and the larger material less rapidly. It is reasonable to assume that material which is being recovered from the river at Harrisburg in 1927 was mined in the Lykens Valley 20 or 25 years ago, and in the Shamokin Valley 30 or 40 years ago.

Methods of recovery. The smaller tributaries of the rivers are in most places too narrow, shallow, or swift for the use of floating outfits such as pumps and dredges. The most popular method for recovering coal in these creeks is entirely by hand. In some localities a conveyor bucket chain lifts the coal from the creek up onto a small loading table. The coal is shoveled by hand into the buckets.

At one place on Shamokin Creek a small washery was erected for the purpose of recovering a very large accumulation. The creek coal was carried to this washery by a scraper line and by hand loading. There is very little river and creek coal recovered today entirely by manual labor. Some small operators along the creeks recover a few tons of coal for local consumption. After a freshet considerable piles of domestic-sized anthracite are accumulated for local use. This material is mixed with pebbles, chunks of wood, and other undesirable material. It does not make the best domestic fuel.

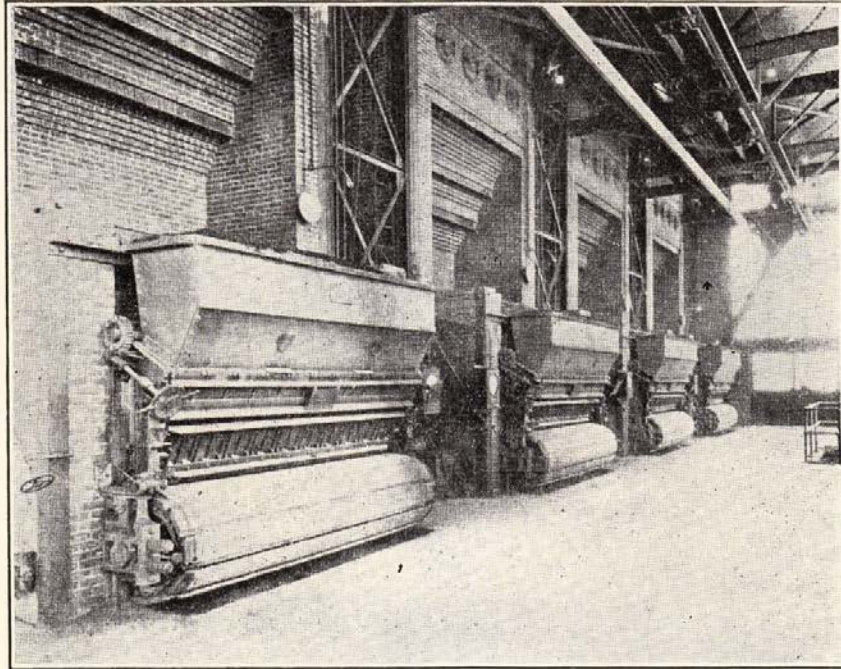
Practically all the river coal is now recovered by rotary pumps which are permanently installed on the banks or on floating barges. The larger producers own a fleet of several flatboats which are moved back and forth under their own power to the most desirable localities. After each freshet the Susquehanna River at Harrisburg is a new Eldorado. As soon as it is safe to navigate, the fleets of boats hastily leave their moorings and go in search of the most desirable deposits. The lucky ones reap the greatest harvest. The mixture of coal and sand pumped out of the river is separated in a very rough manner by passing over screens mounted on the dredge. These improve the quality of the product by retaining the coarser coal and returning the sand to the river. Some of the companies have been doing some special screening but the results do not justify the increased cost of production.

The recovery of river coal is seasonal and the quantity obtained depends upon the number of freshets during the year. In Harrisburg river coal was in great demand during 1926 and the first part of 1927. A number of freshlets provide excellent recovery conditions.

In former years several thousand tons of domestic-sized anthracite was recovered yearly from the creeks draining from the anthracite region. This part of the industry is almost disappearing.

Use of river and creek coal. Practically all the river coal is used by commercial plants for generating power and for briquetting. Thousands of tons are used each year for generating electricity in the vicinity of Harrisburg. Very little other coal is used for this purpose.

River coal must be burned by forced draft on equipment designed for the burning of fine-sized anthracite. Practically all the grates



A. Coxe stokers under 612 h. p. boilers at Cornell University.



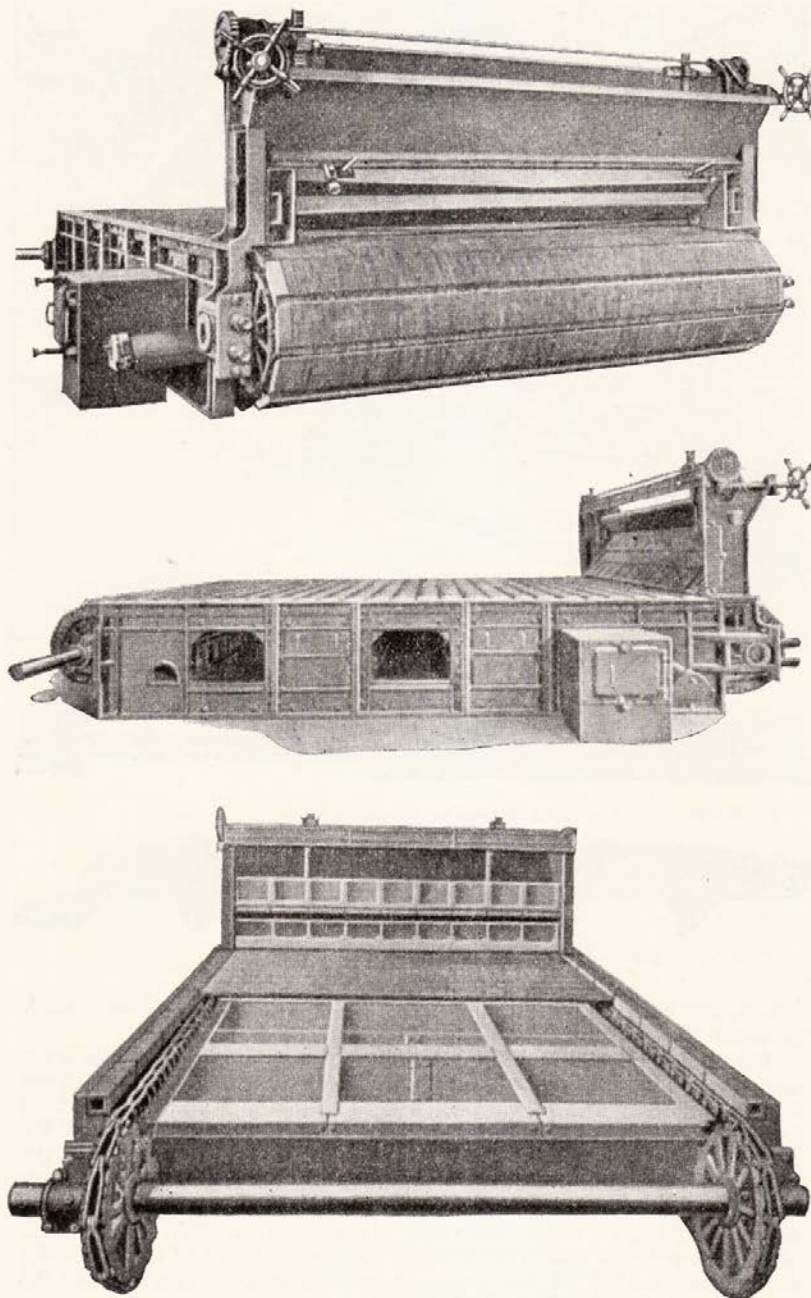
B. Detail of bar showing method of attaching keys.



C. Coxe stoker grate keys.

which are used are of the Coxe travelling grate type. Plate XXX pictures the construction of this grate.

This stoker consists of the main body, the grate, the driving gear, and the hopper. There are two sectional cast iron side frames about 3 feet in height and of varying length, depending on the length of active fire which is required. These frames are provided at the rear end with pedestal bearings to hold the rear or driving shaft, and at the front end with take-up grates for the front or idler shaft bearings. In the side frames are openings corresponding to the forced draft air connections and other openings for the removal of dust or siftings which accumulate during a period of time. Under the active portion of the grate is built a box of sheet steel, the bottom of which is about 10 inches from the bottom of the frames.



Front, side, and rear views of Cox's stoker.

This allows sufficient space beneath for the return travel of the grates. At the front end and vertical side or end of the air box is a cast iron plate which extends the full length of the stoker. This serves as an air seal and as a carrier of the grate bearings. At the rear end of the air box is a similar vertical plate and horizontally sealed plate; between these plates is the active grate surface. There are 2 or 3 lateral trunks or air boxes built into the side frames at their ends, and closed on the bottom by the bottom sheet and on the top by a cast iron sealed plate to the same level as the front and rear sealed plates. The plate is, however, somewhat narrower than the front and rear plates. Its width is about equal to the distance between the ribs of the adjacent carrier bars. Each compartment contains 2 or 3 tuyeres or air boxes. Midway between the tuyeres is another vertical partition with a sealed plate at the upper end which divides the under grate section into 4 or 6 compartments communicating with the under side of the grate. Grid valves or gates are provided in the vertical side of the tuyeres and for the full length of the stoker to distribute air from the tuyeres or boxes. Both the stationary grate and the sliding member are ground to insure a tight fit when they are closed. The sequence of compartments for a two tuyere stoker from the front to the rear is (1) an air compartment, (2) a tuyere with a sliding damper which controls the air to the first compartment, (3) a second compartment which takes the air through the rear side of the front tuyere, (4) a vertical partition, (5) a third air compartment, (6) a second tuyere, (7) another air compartment.

The Coxe stoker is driven through the rear shaft through a pair of worm and stem gears, the larger of which is located at the end of the stoker shaft which passes through the side wall. The worm of this gear is driven by a shaft which is in turn driven by a second worm and wheel gear which is usually placed behind the boiler. The drive is continuous, silent and without shock.

The grate surface consists of a number of narrow castings about $5/8$ inches wide, flat on one side, and having on the other a number of projections about $3/32$ inches high which separate these fingers or keys at that distance. The keys are slightly curved on their top edge. They are strung on malleable iron dove-tails which in turn are bolted to a carrier bar. These bars which are of skeleton type extend the full length of the stoker and terminate in solid ends on the underside where steel bar lugs engage drop forged chains which convey the bars around.

The first essential for good combustion in a river coal fuel bed is uniform resistance so that the air will be evenly distributed, thus avoiding an excessive quantity at one point and insufficient at another. The coal must be of fairly uniform size and evenly distributed on the grate. In the Coxe stoker the grate surface is so designed that fine streams or jets of air of uniform size are admitted through the grate. The fuel bed is of uniform thickness at the entering point and along any line parallel to the front of the stoker. The total resistance of grate and fuel bed is also uniform. As the coal is burned the resistance of the fuel bed decreases toward the rear of the grate, and if the entire grate were under the same air pressure obviously most of the air would pass through the

central fire at the end of the grate where it was least required. By means of multiple air compartments it is possible to vary the pressure under the different portions of the grate in accordance with the thickness of the fuel bed above each compartment. Hence a uniform fire can be maintained over the entire grate. If necessary only one-half or three-fourths of the grate may be used for combustion. The rear compartment can be closed to draft which makes it possible to burn the coal at a higher rate of combustion on the front portion of the stoker and thus maintain the necessary high temperatures required for ignition.

In most installations the ashes fall off the rear end of the stoker as it rotates into a pit. This pit is flooded with water or the ashes are removed by conveyor. River coal is not of uniform size and constant variation of draft is necessary. Large pieces cause dark spots in the fire and where the material is extremely fine forced draft makes blow holes through the fire bed. The finer the coal the less is the efficiency and also the greater the quantity of ash. If the coal is too fine it is blown through the flues and into the ash pit. With river coal as it is being produced today quick combustion is the most efficient. The heating value of river coal has not changed although the sizes which are recovered are much smaller than those 5 years ago. Much of the discussion of the use of river coal was taken from the publications of Combustion Engineering Corporation. Mr. Lee Coleman, combustion engineer of the Harrisburg Light & Power Company, furnished additional information.

Susquehanna River area. Susquehanna River and its tributaries drain the entire Northern Anthracite Field, part of the Eastern Middle Field, all of the Western Middle Field, and part of the Southern Field. All of the silt-laden water flows into the Susquehanna River north of Harrisburg with the exception of Swatara Creek which enters the Susquehanna at Middletown. The beds of the creeks are heavily overlain with deposits of silt, and the river bottom is lined with silt bars.

The first recovery of coal in the Susquehanna drainage area was in the river itself. Recovery of coal from creek beds did not start until 1915 when coal was in great demand and the price of soft coal had increased to high levels. Since 1916 numerous operations, some of which were not permanent, have been installed on Wiconisco, Mahanoy, Shamokin, and Swatara creeks and on the North Branch of the Susquehanna. The coal recovered from the creeks is practically all used near-by. Some of the coal recovered from the river is shipped to distant points, but most of its is used in the vicinity of Sunbury and Harrisburg. On Wiconisco Creek the Pennsylvania Railroad is accessible for shipping at Millersburg near the mouth of the creek, and at Dornsife, Elizabethtown, and Loyalton. Other points along the creek are inaccessible to the railroad and even at the points where the railroad is close to the creek, transportation is expensive because the railroad grade is approximately 50 feet above the creek level. The creek coal operations on Wiconisco Creek are now confined to the vicinity of Elizabethtown.

The coal from Mahanoy Creek can be shipped either by the Reading or Pennsylvania Railroads to Herndon at the mouth of the creek,

on the Reading at Dornsife Station, and at Hunter Station. These are the only points on Mahanoy Creek where large operations can be successfully conducted. Four well established concerns are operating on Mahanoy Creek. This creek contains large quantities of silt and is a fertile source for material which flows into Susquehanna River.

Shamokin Creek flows through the open country between Shamokin and Sunbury. It is flanked on one side by the Philadelphia & Reading and by the Pennsylvania Railroad on the other. Short side tracks from both railroads are available and shipping facilities are good. Large accumulations of silt are being worked extensively in the vicinity of Sunbury and Deibler, Reed, and Shamokin. There are extensive creek coal operations at Gordon and Barry. The accumulations at this point are large and the shoals are a fruitful source of good material. A briquetting plant is being contemplated at Gordon.

The Delaware, Lackawanna & Western follows the west bank of the North Branch of the Susquehanna and the Pennsylvania the east bank. These two railroads offer good shipping facilities to river coal operations between Sunbury and Pittston. The active operations along this branch are at Klines Grove, Danville, Armedia, Espy, Hecks Ferry, and Plymouth.

The most extensive operations in river coal are on the main Susquehanna between Sunbury and Pequea. Two dozen or more companies are operating in this area. Coal is recovered at Sunbury for briquetting. At Herndon coal is recovered for local use and for shipment. At Clarks Ferry coal is dredged and some of it loaded for shipment, and some is trucked to Harrisburg. River coal operations are carried on practically continuously from Clarks Ferry to New Cumberland except where the current is too swift or the river is not deep enough to operate flat boats. The next extensive operation to the south is at York Haven. At Columbia and Marietta two or three companies are operating successfully. The most southern operation is at Pequea. Silt accumulations occur in large quantities as far south as the State line but they have not been worked, probably because they are far from a point of consumption and the sizes are prohibitively small.

Swatara Creek drains a large anthracite mining territory and has carried away thousands of tons of silt. Below Jonestown, Swatara Creek becomes winding and comparatively sluggish and before it reaches Middletown it has deposited practically all of its coal burden. At Hummelstown there is little coal along the banks or in the shoals. The water is discolored but it is said that fish have been living in this creek up to this point. Small hand operated plants have been recovering creek coal intermittently in the vicinity of Green Point. This coal contains a large percentage of domestic sizes. In fact, Swatara Creek offers the only virgin dredging territory. Parts of the creek have not been dredged extensively because they are distant from any point of consumption and there are no railroad facilities. Thousands of tons of coal can be recovered from this creek bottom.

Schuylkill River area. Schuylkill River drains a large territory in the vicinity of Pottsville. Many large breakers are located on its drainage area. As a result enormous accumulations of silt have been deposited between Pottsville and Reading. Silt deposits are present practically all the distance between Pottsville and the Montgomery County line. Indications of silt can be seen as far as Philadelphia. All of the dredging operations in this river are between Pottsville and Reading. Between these two towns the river is flanked by the Pennsylvania and Reading railroads. Transportation facilities are good. Practically all the coal taken from Schuylkill River is reclaimed by rotary pumps mounted on flat boats as in the Harrisburg district. Some half dozen companies are operating on this river and remove much coal each year. Schuylkill River seems to replenish its coal supply very rapidly. One company operating 1 mile south of Schuylkill Haven has worked for four years in an area which does not exceed 4,000 feet along the river. They have removed many thousands of tons of coal and at no time were they compelled to suspend operations for lack of it. The operations on the Schuylkill are small compared to those on the Susquehanna and its branches. Water conditions are not favorable for pumping at a great many points. Hand mining is possible because of the large accumulations along the river bank and in the fields. These deposits will eventually be worked over.

Lehigh River area. The Lehigh River drains only a small part of the anthracite field and obtains practically all its silt from Nesquehoning Creek. Operations of river-coal plants are very sporadic on this river and only a small tonnage is recovered each year. In the vicinity of Mauch Chunk and further south the Lehigh Coal & Navigation Company dredges some coal out of the old canal bed. This company reclaimed 100,000 tons of coal in 1919 but has made no report since that time. One or two other operations work intermittently and produce but a small tonnage.

Statistics of production. Approximately 10,000,000 tons of coal have been recovered from the rivers and creeks draining from the anthracite field. The greatest production was 1,935,000 tons in 1919. This great demand was created by the shortage of coal caused by a prolonged coal strike. Production went back to normal again in 1921 and has shown very little decline. The following table gives production statistics for 1921-1925,* inclusive.

Production of river coal in Pennsylvania, 1921-1925

	No. of operations	No. of employees	Expenses and wages	Capital investment	Tons	Value
1921 -----	50	388	\$ 318,800	\$1,058,300	502,920	\$ 717,700
1922 -----	61	617	551,100	1,578,400	887,041	1,316,200
1923 -----	61	613	555,000	1,694,100	911,371	1,114,400
1924 -----	47	524	508,200	1,432,700	763,460	906,600
1925 -----	46	446	556,100	1,225,300	791,920	998,000

*Pennsylvania Department of Internal Affairs, Bureau of Statistics.

Production of river coal, by counties, in 1925.

County	No. of operations	No. of employees	Expenses and wages	Capital investment	Tons	Value
Berks	4	25	\$ 39,400	\$ 78,800	48,985	\$ 63,200
Columbia	4	8	4,100	30,000	10,669	12,000
Dauphin	12	230	274,100	374,100	307,244	372,400
Lancaster	2	18	32,200	108,500	65,738	84,100
Lebanon	1	4	2,500	19,000	4,629	7,800
Luzerne	1	20	20,700	100,000	64,598	67,800
Montour	2	2	700	5,500	1,740	3,100
Northampton	1	5	10,100	16,000	36,176	41,700
Northumberland	11	85	107,900	331,600	155,799	215,000
Schuylkill	7	52	36,300	115,300	66,605	86,500
York	1	17	28,100	46,500	29,745	44,400
	46	446	\$556,100	\$1,225,300	791,920	\$998,000

Future of the river coal industry. There is diverse opinion among river coal operators as to the life of the river coal industry. This industry does not depend entirely upon supply. It is an economic condition which is governed more or less by market conditions. In all probability, market conditions would be favorable enough to continue river coal operations for a great many years, particularly on the Susquehanna, but the supply of river coal is not inexhaustible. During the last few years the anthracite-producing companies are making a serious attempt to recover all the fine sizes of anthracite. Some companies are now letting No. 4 buckwheat go into the stream but not wilfully. The source of river coal larger than No. 4 buckwheat has been eliminated. Large quantities of No. 4 buckwheat and slush are discharged into the stream and this will afford some supply for the future. Nevertheless, even this supply is greatly diminished. The creeks will gradually clean their channels and wash additional material into the streams. River dredging will be carried on in the Susquehanna area for 25 years or more. The industry will die a natural death and a time will come when it will not be profitable to dredge for coal alone. River coal will again be a by-product of the sand and gravel industry.

There seems to be a large supply of river coal on Schuylkill River. This coal is on the flood plains of the river and is increased each year. The river stays in its channel and leaves these deposits practically unmolested. The river coal industry can be carried on for many years on the Schuylkill.

Lehigh River is not such a fruitful source for silt and its possibilities will become less and less in the future. The collieries which have been supplying the river with its silt are now conserving the very smallest of sizes.

Quality and size of river coal. River coal decreased gradually in size until 1922-23. During this period there was a decided decrease in the percentage of large sizes. This may be indirectly traced to the suspension of mining in 1919 with the subsequent demand for river coal. During this period the better accumulations were worked over. From 1923 to 1927 the size of river coal has not decreased to any great degree. At Harrisburg 50-65 per cent of the coal goes through 3/32 inch round mesh. Below Harrisburg 80 per cent goes

through 3/32 inch mesh. An average size analysis of river coal at Harrisburg is as follows:

	Per cent
Over 3/16	6.5
Through 3/16, over 3/32	25.85
Through 3/32, over 1/16	42.65
Through 1/16	25.00

In the years 1926-27 there has been some complaint about the quality of river coal. As the sizes become smaller it is more difficult to separate the sand from it. The quality of the coal itself has not depreciated. As the size of the coal decreases the quality will become worse and worse. The quality depends almost entirely upon the care which is taken in preparation.

Seven freshets of the Susquehanna in 1927 brought down a large quantity of coal, and the river coal industry flourished. The coal was 10 per cent larger than in 1926. Eighty per cent of it passed through a 3/32 inch screen. The increase in size is due to better preparation methods, and the large number of freshets.

River coal is unique in that it offers a profitable recovery of a waste material. It is the only natural material which has been wasted in the State and recovered after a long time. River coal has been beneficial to the communities along the creeks and rivers in which it occurs, and many profitable industries have been founded because of its presence. It has afforded cheap power and light to Harrisburg for a great many years.

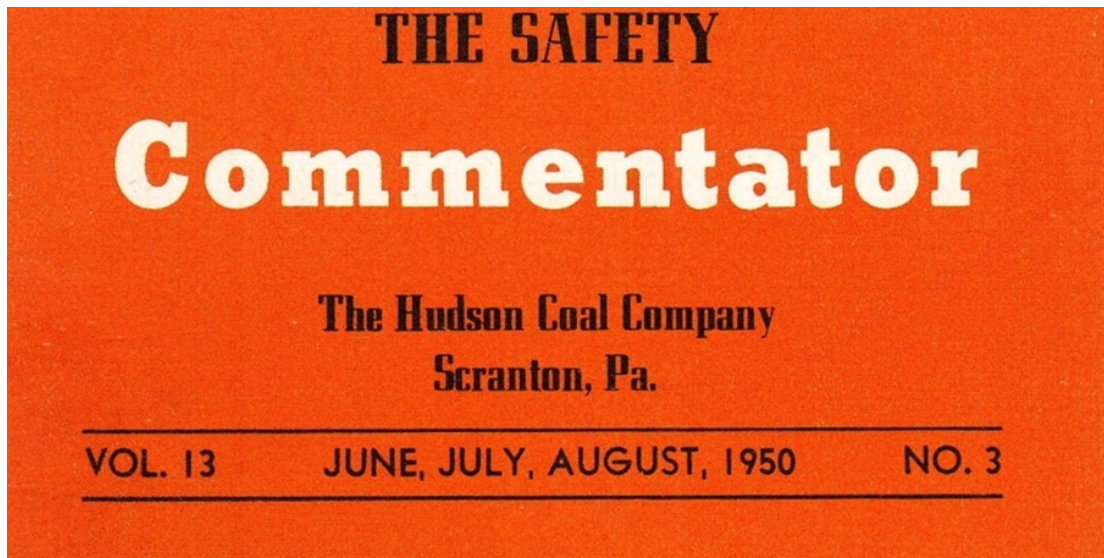
River Coal Producers in Pennsylvania

Company	Office Address	Works Address	County
Alleman, Grant E. (Drifted Coal & Supply Co., -----	Shoemakersville, ..	Shoemakersville, ..	Berks.
Anthracite Dredging Company, 247 Wyoming Ave., -----	Kingston, -----	Plymouth, -----	Luzerne.
Anthracite Production Co.,	Pequea, -----	Shenks Ferry,	Lancaster.
Auburn Drifted Coal Co., -----	Shoemakersville, ..	Auburn, -----	Schuylkill.
Bevenue Coal Company, -----	Marysville, -----	Marysville, -----	Perry.
Besteckl, Baron, 315 Walnut St.	Harrisburg, -----	Clarks Ferry,	Dauphin.
Blue Mountain Coal Co., -----	Hamburg, -----	Hamburg, -----	Berks.
Brown, Charles, -----	New Cumberland, ..	Herdon, -----	Northumberland.
Custer, C. E., -----	Almedia, -----	Almedia, -----	Columbia.
Davis, C. C., 315 Sixth Street,	New Cumberland, ..		Cumberland.
Daft, Harry, -----	Marietta, -----	Columbia, -----	Lancaster.
Deibler Coal Co., 435 Commer-	Philadelphia, -----	Deibler, -----	Northumberland.
cial Trust Bldg., -----	Harrisburg, -----		Dauphin.
Downey, F. H., 1329 S. Cameron			
St., -----			
Ebersole, John M., P. O. Box	Reading, -----	Tuckerton, -----	Berks.
388, -----			
Ebony Coal Co., 621 E. Dewart	Shamokin, -----	Shamokin, -----	Northumberland.
St., -----	Highspire, -----		Dauphin.
Etmoyer, R. J., -----	Harrisburg, -----		Dauphin.
Filling, W. H., 1335 N. 6th St.	Orwigsburg, -----	Landingville,	Schuylkill.
Fisher, C. Arthur, -----	Treverton, -----	Dornsife, -----	Northumberland.
Fordham & Co., B. W., -----	Danville, -----		Montour.
Forney, Chas. E., -----	Philadelphia, -----	Barry, -----	Schuylkill.
Franklin Coal & Coke Co., 1600			
Walnut St., -----	St. Benedict, -----	Gordon, -----	Schuylkill.
Gordon Company, -----			

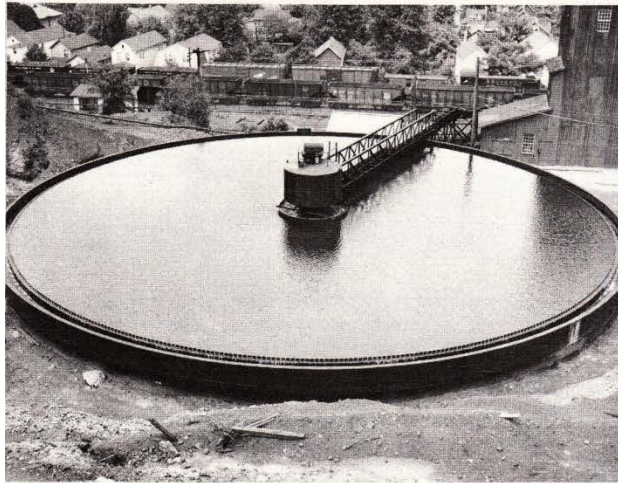
Company	Office Address	Works Address	County
Hess, Luther, -----	Espy, -----	Espy, -----	Columbia.
Hoffman, Reese & Son, -----	Almedia, -----		Columbia.
Hoover Coal Co., -----	Dornsife, -----	Dornsife, -----	Northumberland.
Huff, Wm. H., -----	New Cumberland, -	New Cumberland, -	Cumberland.
Industrial Coal Co., 422 Bridge St., -----	New Cumberland, -		Cumberland.
Kulp Coal Co., -----	Shamokin, -----	Reed, -----	Northumberland.
Landingville Coal Co. (Bechtel & Nichter), -----	Pottsville, -----	Pottsville, -----	Schuylkill.
Line Mountain Coal Co., 910 Franklin Trust Bldg., -----	Philadelphia, -----	Dornsife, -----	Northumberland.
McCreath, R., 565 Race St., ----	Harrisburg, -----		Dauphin.
McGready Krout & Company, -	York Haven, -----		York.
Mackennan & Hatch Co., The, Mahanoy Valley Coal Co., 106 E. Chestnut St., -----	Herndon, -----	Herndon, -----	Northumberland.
Martin Construction & Supply Co., 135-45 N. 10th St., -----	Shamokin, -----	Girardville, -----	Schuylkill.
Meadow Hill Coal Co., 430 Scranton Life Bldg., -----	Harrisburg, -----	Harrisburg, -----	Dauphin.
Mengel, Uriah H., -----	Scranton, -----	Herndon, -----	Northumberland.
	Auburn, -----	Auburn, -----	Schuylkill.
North Branch Dredging Co., Susquehanna Ave., -----	Sunbury, -----	Sunbury, -----	Northumberland.
Port Clinton Coal Co., c/o Frank M. Master, Calder Bldg.	Harrisburg, -----	Port Clinton, ----	Schuylkill.
Robbins Brothers, -----	Bloomsburg, -----	Hicks Ferry, ----	Luzerne.
Scranton Bayonne Coal Co., 128 Wyoming Ave., -----	Scranton, -----	Hunter (Dornsife),	Northumberland.
Scranton Electric Co., 509 Linden St., -----	Scranton, -----	Butzback, -----	
Scranton Fuel Co., 308 Union Bank Bldg., -----	Scranton, -----		
Schuylkill Haven Drifted Coal Co., P. O. Box 554, -----	Schuylkill Haven, -	Schuylkill Haven, -	Schuylkill.
Seebold, C. C., -----	Riverside, -----		Northumberland.
Shamokin Anthracite Reclaiming Co., 604 Colonial Trust Bldg.	Reading, -----	Klines Grove, -----	Northumberland.
Shamokin Valley Coal Co., 102 Franklin Bank Bldg., -----	Philadelphia, -----	Deibler, Paxinos,	
Shissler, Ed., -----	Camp Hill, -----	Reed, -----	Northumberland.
Slider & Erb, -----	Elizabethetown, -	Marietta, -----	Cumberland.
Sneidman Brothers, -----	Almedia, -----	Almedia, -----	Columbia.
Steward, Ray E., 1408 N. Front St., -----	Harrisburg, -----	Harrisburg, -----	Dauphin.
Stewart, M. B., -----	West Fairview, --	West Fairview, --	Cumberland.
Stroh, Crist and Fred, 3218 Green St., -----	Harrisburg, -----		Dauphin.
Sturtevant & Hetherland Coal Co., -----	Elizabethville, -----		Dauphin.
Summerville, A. H., 117 Wall St.	New York, N. Y.	Barry, -----	Schuylkill.
Susquehanna Dredging Co., --	Columbia, -----		Lancaster.
Thompson Coal Co., -----	Auburn, -----	Auburn, -----	Schuylkill.
Treichler Drifted Coal Co., -----	Shoemakersville, --		Berks.
Weston-Dodson & Co., Inc., 523 N. New St., -----	Bethlehem, -----	Deiblers (2 plants)	Northumberland.
Zeigler Coal Co., F. A., -----	Elizabethville, -----	Elizabethville, ----	Dauphin.

Hudson Coal Company, Stream Clean Up

Beginning in the late 1940s, The Hudson Coal Company participated actively in stream clean up at its facilities in the anthracite region. Those efforts are described in *The Safety Commentator* of June, July, August 1950:



STREAM POLLUTION CONTROL



Desilting Tank at Pine Ridge

Virtually all preparation of anthracite coal requires water for cleaning and, throughout the years since the introduction of wet preparation, a great deal of the black water from the breakers, containing some solids, has been allowed to run into the streams and rivers of the anthracite region. In 1945 the Legislature passed a law, which was signed by the Governor on May 8th, prohibiting the discharge of waters of this type, including industrial wastes and sewage, into the streams of the State unless it has been treated to eliminate practically all solids.

The Hudson Coal Company has been cooperating in the so-called stream clean-up program. At Powderly Colliery a number of years ago a Dorr Tank 120 feet in diameter was installed. The underflow from this tank, containing solids, was pumped to a large silt bank. All of the waste solids at Laflin are pumped to a silt bank. At Loree, at very great expense, an installation to handle the silt was made and put into operation in 1949.

In the spring of this year we completed the installation of an 120 foot diameter Hardinge tank at Pine Ridge, into which the breaker water containing the solids is discharged, as you will note in the picture. The solids, with a small amount of water, are taken as underflow from the tank and pumped through the discharge line, to a settling basin in the old Pine Ridge refuse bank.

We are now in the process of installing an 140 foot tank at Marvine for the same purpose. Several years ago a partial installation was made at Marvine to take out most of the solids which formerly reached the river and when the construction now underway is completed the silt handling arrangements will be adequate to meet the State requirements. We propose to make a somewhat similar installation at Olyphant in 1951.

When all of these silt plants are completed, the cost to the Company will be close to a million dollars, plus the usual operating and maintenance costs throughout the years to operate and maintain this expensive equipment.

JUNE, JULY, AUGUST, 1950

1920

Collieries of the Upper Swansea Valley, South Wales

On June 23, 2017, Selwyn Morris of Ystradgynlais introduced the author to John Owens, the Treasurer of the Ystradgynlais District Heritage & Language Society. The meeting took place at the site of the Ynysgedwyn Ironworks in Ystradgynlais, South Wales.

At that meeting, John Owens gave to the author a 43-page document titled “Collieries of the Upper Swansea Valley” (updated March 3, 2014) which he wrote. Here are the first three pages of that excellent document:

COLLIERIES OF THE UPPER SWANSEA VALLEY

[Updated 03.March 2014]

Abercrave Area	Ystradgynlais Area	Cwmtwrch Area	Cwmtwrch Area Continued
Abercrave Colliery	Bryn colliery ?	Afon Iefel	Horseway Colliery ?
Caerlan Colliery	Bryngroes Colliery	Arch Iefel ?	Level Caerbryn
Cwmtawe Colliery	Bryn Varteg Colliery	Blaencwm Colliery	Level Coed Caer Gors
Drum Colliery	Cwm Bargoed Colliery	Black Mountain Colliery	Level Martin
Duffryn Anthracite Coll.	Cwmgiedd Colliery	Brynderi Colliery	Level Morgan Gwilym
Dulais	Diamond Colliery	Bryngorof Colliery	Level Phil
Ffosddu Colliery	Hodgen's Colliery	Brynhenllys Colliery	Level Sion Wilks
Gwaunclawdd Colliery	Lower Cwmtawe Colliery	Brynhyfryd Colliery	Level Twm Rees
International (Candy) Colliery	Neath Bridge Colliery	Brynmorgan Colliery	Level William Bowen
Iefel Fawr	Pantmawr Colliery	Caebedw Colliery	Level y Bryn
Iefel Flook	Park Colliery	Coedffaldau Colliery	March Hywel Colliery
Llwynallt Colliery	Penrhiwfarteg Drift Mine	Craig Brynmorgan	Mynydd Bach Colliery
Nicky Nack (Glyn Llech?) Colliery	Rhos Goch Colliery	Craig Twrch Colliery	New Brook Colliery
Tynyant Colliery	Tynyant Colliery	Craig y Felin	Oak Colliery
	Wern Plymis (Plemys) (Gurnos) Colliery	Cwm Bargoed Colliery	Old & New Palleg Colliery
Penrhos Area	Ynis Merthyr Colliery	Cwm Felin Colliery	(Level Pistyll Edward & Level Hexham)
Cwmdu Colliery	Yorath Colliery	Cwmllynfell Colliery	Old White Vein Colliery ?
Hendreladis Colliery	Ystradgynlais (Ystrad Fawr) Coll.	Cwmphil Colliery	Pentwyn Colliery
Ynyscedwyn Colliery (& Venti)	Pwll Bach Cwmgiedd	Cwmtwrch Colliery	Pwll y Balance
		Gelliwarog Colliery	Pwll Cox
Other		Gilfach Colliery	Pwll Harris
Cnapiog Colliery ?		Gilwen Colliery	Pwll Maespica
Cwmtawe Colliery ?		Henllys Vale Colliery	Tirbach Colliery
Dulais Colliery ?		Glantwrch Colliery	Trorglein Colliery

		Glynllech Colliery ?	Twrch Colliery
		Glyncynwal Colliery	Ty Gwyn Colliery
		Graig Colliery	Tyrch Colliery
			Waunlwyd
			Ynys Patmos
			Ystradowen Colliery

The 1984-85 Miners' Strike

The 1984-1985 miners' strike marked a turning point not only for the British coal industry and the communities dependent upon it, but also for the wider labour movement. The eventual defeat of the miners heralded a run-down of the industry more severe than even the gloomiest of **Arthur Scargill's** (NUM General Secretary) predictions, with almost a hundred collieries being closed and over a thousand jobs lost during the three years following the strike. This has entailed the virtual demise of the coalfields of Scotland and South Wales.

The N.C.B. announced on the 6th March 1984, that they were to reduce the national output of coal by 8 million tons with the closure of several collieries.

The NUM 's members in Yorkshire and Scotland immediately demanded strike action. What developed was the largest and most bitter dispute in the coal industry in which the miners felt themselves to be increasingly fighting to save the industry itself, its communities and even the continuing existence of the N.U.M. Nowhere was the fight more solid than in the South Wales coalfield.

SIR ALFRED MORITZ MOND, British politician, was born at Farnworth, near Widnes, Lancs., Oct. 23 1868, the son of the famous chemist Ludwig Mond. He was educated at Cheltenham and St. John's College, Cambridge, and afterwards at Edinburgh University. In 1894 he was called to the bar, and afterwards joined the North Wales and Chester circuit. He entered the firm of Brunner, Mond & Co., becoming a director in 1895, and also became chairman of the Mond Nickel Co. [which later became the nucleus of I.C.I.] and a director of the South Staffordshire Mond Gas Co. and various other companies. Mond was also involved in politics and sat as Liberal Member of Parliament for Chester from 1906 to 1910, for Swansea from 1910 to 1918 and for Swansea West from 1918 to 1923. He served in the coalition government of David Lloyd George as First Commissioner of Works from 1916 to 1921 and as Minister of Health (with a seat in the cabinet) from 1921. Mond was created a Baronet, of Hartford Hill in Great Budworth in the County of Chester, in 1910, and was admitted to the Privy Council in 1913. In 1928 he was raised to the peerage as Baron Melchett, of Landford in the County of Southampton. His wife Violet, daughter of J. H. Goetze, was well known in society, and was created D.B.E. for her work during the war; and their daughter Eva Violet married in 1914 Visct. Erleigh, eldest son of Lord Reading. He died in London on 27th December 1930.¹

In 1910 Sir Alfred Moritz Mond moved into South Wales. Mond was soon to make a major impact on the anthracite section of the Coalfield by forming **Amalgamated Anthracite Collieries Limited**. He observed the chaotic state of the mining industry in the area (there were over a hundred small colliery companies producing 4,833,000 tons of anthracite coal in 1913) and set about forming his own combine which came to dominate the anthracite area; his plan was to eliminate competition, pool financial resources, reduce overheads, provide joint power plants, allocate coal reserves, fix prices, standardise qualities, fix markets, reduce selling costs and to develop sales. In 1913 there were around one hundred separate collieries in the south Wales anthracite coalfield. Many of these collieries were small slant mines which had influence over prices and wages. In the 1920's overseas markets for Welsh anthracite was rapidly expanding and some of the leading coal owners in this section of the Coalfield felt that a complete overhaul in the running of the mines and of the marketing of anthracite was required. Sir Alfred Moritz Mond formed and became chairman of the first of the anthracite combines when he formed the Amalgamated Anthracite Collieries Limited in 1923. United Anthracite Collieries was also established at this time (1923) Amalgamated Anthracite Collieries Limited was formed in 1923 by absorbing Cleeve's Western Valleys Anthracite Collieries Limited and its subsidiary, Gellyceidrim Collieries company Limited, then the Gurnos Anthracite Collieries Limited and Yniscedwyn Anthracite Collieries Limited. Sir Beddoes Rees was quick to follow Mond's example and merged eight small colliery companies, including the Abercrave Colliery Company, International Colliery Company, Gwaunclawdd Abercrave Collieries Company Ltd and Ystalyfera Collieries Ltd. to form the Welsh Anthracite Collieries Limited. In 1926 Amalgamated Anthracite Collieries Ltd merged with the United Anthracite Company, and in 1928 with the Llewellyn and Buckland Group, eventually swallowed up the other combines to control 80% of the South Wales anthracite production.²

Source: 1. Internet 2. UCS

Sir Alfred Cope took employment with Lord Melchett as First Secretary of the Amalgamated Anthracite Company in 1925 and later became Deputy Chairman of the combine. When the £5 million merger took place between the Amalgamated Anthracite Collieries Ltd and the United Anthracite Collieries Ltd in 1927, Sir Alfred Cope became Managing Director of the amalgamated company. No man before him had organised such a centralised control in the local coal industry, with his responsibilities covering 21 collieries after the amalgamation

Note: Source: UCS is *South Wales Coalfield Directory* (2005) Volumes 1 and 2 Ray Lawrence
South Wales Miners Library, University College Swansea

Pages 4-43 of “Collieries of the Upper Swansea Valley” (updated March 3, 2014) by John Owens are a detailed catalogue of data about all of the collieries listed on pages 1-2 (shown above) of this important historical document, a copy of which is now in the archives of the Carbondale D&H Transportation Museum.

The meeting at which John Owens gave the author a copy of “Collieries of the Upper Swansea Valley” (updated March 3, 2014), as we mentioned above, took place at the site of the Ynysgedwyn Ironworks in Ystradgynlais, South Wales. Shown below are two photographs, taken that day at the ruins of those ironworks:



Ynysgedwyn Ironworks in Ystradgynlais, South Wales, June 23, 2017



Ynysgedwyn Ironworks in Ystradgynlais, South Wales, June 23, 2017. The group standing at the base of the smokestack in the center of this photograph are the Voices of the Valley, from Archbald, PA, who were on a 5-concert tour of South Wales, June 18-July 3, 2017.

It was at the Ynysgedwyn Ironworks in Ystradgynlais where, on February 5, 1837, the first iron furnace to be successfully fuelled by anthracite coal (and not by charcoal or by coke) was blown-in by David Thomas (3 November 1794–20 June 1882). About David Thomas and about the consequences of his discovery that day, we read the following in *The Brecon Forest Tramroads* by Stephen Hughes, 1990, p. 50:

General Trade

Rural foundries

In 1829 the Brecon Forest Tramroad Company commenced operations as lessees of Christie's former line. The Company was formed of people from the agricultural community of the upper Usk Valley who recognized more general economic needs even if failing to recognise the comparative paucity of demand.⁵⁶

Their engineer was a figure of world importance in the history of the iron industry:⁵⁷ David Thomas, a native of the Swansea Valley, born in 1791 (Fig. 25). In 1812, when 17, he went to work at the Neath Abbey ironworks, the largest and most advanced producer of machinery and steam engines in south Wales. By 1817 he was erecting pumping-engines in Cornwall for the Neath Abbey Ironworks Company and already showing enough brilliance to be appointed superintendent of the Ynysgedwyn ironworks. He remained superintendent of the works and mines there for 22 years.

The works at Ynysgedwyn had been sited at the head of the Swansea Valley in the seventeenth century to make use of local timber supplies for fuel. The building of the Swansea Canal between 1794 and 1798 had prompted the beginning of experiments to smelt the iron-ore reserves in the upper valley on a much larger scale with the local anthracite coal, but these had met with limited success. In 1820 David Thomas began his own experiments. The key to success was the idea of using a furnace fitted for hot-blast as patented by Neilson in 1828. This was recognized by both Thomas and George Crane, the owner of the Ynysgedwyn Works. On 5 February 1837 the first furnace to be successfully fuelled by anthracite alone was blown-in.⁵⁸ This success prompted an ironworks building boom. Some 36 iron furnaces were built in the anthracite coal belt in the succeeding years and no less than 21 of these were connected to the Brecon Forest Tramroad. The implications of these events for the tramroad will be discussed in the last section of this chapter.

The Brecon Forest Tramroad was one of three tramroad lines built from industrial south Wales to rural mid Wales in the early nineteenth century. It functioned for almost 40 years (1825-1863). The Brecon Forest Tramroad ran to the northern end of the Swansea Canal.

On June 23, 2017, at Ystradgynlais, Ben Lewis, a member of the Cor Dathlu Cwmawe, gave the author a copy of *The Brecon Forest Tramroads* by Stephen Hughes (1990, 368 pages).

In 1838, David Thomas was recruited by the Lehigh Coal and Navigation Company to come to America to supervise the foundation of anthracite-fuelled ironworks in the United States. In May 1839, David Thomas and his family emigrated to America. On July 3, 1840, at Catasauqua, PA, under the direction of David Thomas, the first successful anthracite-fuelled blast furnace in America was blown in. About this technology transfer from Wales (Ystradgynlais) to America (Catasaqua, PA), we read the following in Hughes:

“As early as May 1837 an American visitor came to see the first ever successfully working anthracite iron-furnace, at Ynysgedwyn. Most accessible reserves of American coal were of anthracite, but as ye unusable in the country’s fledgling iron industry. The visitor’s reports were followed by the inspection of the site in November 1838 by Erskine Hazard, one of the leading men of the Lehigh Coal and Navigation Company of Pennsylvania. George Crane suggested to Hazard that David Thomas was the ideal man to supervise the foundation of any successful anthracite-fuelled ironworks in the United States and took him to meet Thomas at the tramroad depot. The Brecon Forest Tramroad Company was practically moribund on 31 December 1838 when Thomas signed a contract to build an anthracite-fuelled blast furnace in Lehigh County, Pennsylvania. He and his family emigrated in May 1839 and he laid out the site of the new works and blew-in the first furnace on 3 July 1840. This was the first successful anthracite-fuelled blast furnace in the United States. Thomas went on to become identified with the manufacture of anthracite pig-iron on a more extensive scale than any of his contemporaries and was called the ‘Father of the American Anthracite-Iron Industry.’ In 1854 he founded the Thomas Iron Company of Hokendauqua which became the largest producer of anthracite pig-iron in the USA. By 1856 the production of anthracite iron centered on the Lehigh, Schuylkill and lower Susquehanna Valleys in Pennsylvania was some 312,000 tonnes, besides another 88,000 tonnes produced by adjoining states. Thus almost half of all American iron—826,000 tonnes in 1856—was produced largely as a result of Davis Thomas’ work. By 1864 the amount of iron produced in the United States was larger than the total produced in south Wales and equal to over one fifth of the British total. David Thomas stood for senate, became a business tycoon associated with several companies and the founder of an industrial dynasty.” (pp. 51-52)

1921

In the Caboose

Additions for Volume III:

1. Shown below is page 313 in Volume III in this series. On that page, in two instances, we wrote/typed “Level 20” when we should have written/typed “Level 22”. On the copy of that page shown below, we have corrected those two typos and highlighted them in green.

This is the site shown in the photograph given below. In the photo, we are looking South as a passenger train moves north on the D&H steam line, the Valley Road.



Level 22, the light track

Level 23 (loaded track) through Olyphant

Possible photo identification:

Empty Gravity coal cars descending through Olyphant on Level 22 and the D&H breaker there, where some of them were filled with coal and taken on the light track to the foot of Plane 23 for shipment to market.



"A northbound passenger train moves on multi-gauge trackage..." says Shaughnessy. Yes, I agree.

For additional data on this photograph, see the volume in this series on the 1829 configuration, p. 113.

This photograph (with specific site not identified) appears in *Shaughnessy* (p. 62, "A northbound passenger train moves on multigauge trackage near Dickson, on the line between Scranton and Carbondale"), in *Osterberg* (p. 30, "A locomotive moves along the tracks outside Carbondale"), and in the D&H's *Track and Roadway* (p. 87, "Steam Road, Scranton to Carbondale"). The photograph (printed in reverse in all three of those volumes, but shown here correctly) was taken, it is our contention, in downtown Olyphant.

Additions for Volume IV:

1. Lois R. Morss

On page 38 in Volume IV (“The 1868 Configuration of the Gravity Railroad”) we state:

“W. H. Richmond was born in Marlborough, Hartford County, CT, October 23, 1821. He married Lois R. Morss, and they were the parents of five children, three of whom were girls, all of whom received classical educations at Vassar College.

Lois R. Morss [the wife of W. H. Richmond] was one of the daughters of George Lord Morss of Simpson, Fell Township, PA. Here is a photograph of the Morss Mansion that was taken by Edward Pikulski of *The Scranton Sunday Times*. . .”

There is an error in line four of the passage given above. The Lois R. Morss who married W. H. Richmond was not a daughter of George L. Morss. Our thanks to Michael J. Yavorosky of Hop Bottom, PA for bringing this error to our attention on December 6, 2016.

The cause of the error: There were two women in George L. Morss’s life who were named “Lois R. Morss.” One was his younger sister and one was his youngest daughter.

The Sister: The Lois R. Morss that W. H. Richmond married at Prattsville, Greene County, NY, on June 5, 1849, was Lois Roxanna Morss, who was born on November 6, 1823 in Windham, Greene County, NY, and who died at the age of 86 on July 11, 1909, at Richmond Hill Farm, Scranton. Her father was Foster Morss. The earthly remains of this Lois R. Morss and those of her husband, W. H. Richmond, are interred in Dunmore Cemetery. This Lois R. Morss had an older brother named George Lord Morss.

The Daughter: George Lord Morss (born May 26, 1816, Windham, Greene County, NY; he was a son of Foster Morss) married in 1841 Lois Austin Tuttle (daughter of Jehiel Tuttle, who settled in Greene County, NY). Lois Austin (Tuttle) Morss was born in Greene County, September 17, 1818, and died at the family residence in Simpson on October 9, 1896. George and Lois Morss had four children, the youngest of whom was named Lois R. (who was born in 1858 and who lived in the Morss Mansion in Simpson, where she died in 1923; she willed the Mansion to the community to be used as a library but her nephew, Leigh Morss, a Scranton attorney, arranged otherwise; possibly she was named “Lois R.” in memory of her Aunt Lois Roxanna Morss, her father’s sister (who married W. H. Richmond). The four children of George and Lois Austin (Tuttle) Morss: Merilla E., wife of L. W. Morss, of Scranton; Isabella, wife of J. W. Aitken; Amanda L., and Lois R. It was George L. Morss who had the house in Simpson built in 1853. He died July 31, 1882. George L. Morss and his wife Lois are buried in Maplewood Cemetery, Carbondale.

Supporting Documents:

George Lord Morss, born May 26, 1816, Windham, Greene County, NY. He was a son of Foster Morss. He married Lois Austin Tuttle (daughter of Jehiel Tuttle, who settled in Greene County, NY) Lois A. (Tuttle) Morss was born in Greene County, September 17, 1818, and died at the family residence in Simpson on October 9, 1896. They had four children: Merilla E., wife of L. W. Morss, of Scranton; Isabella, wife of J. W. Aitken; Amanda L., and Lois R. George L. Morss had the house in Simpson built in 1853; he died July 31, 1882; George L. Morss and his wife Lois are buried in Maplewood Cemetery, Carbondale.

Here is the article about the fiftieth wedding anniversary celebration of Mr. and Mrs. W. H. Richmond: **“W. H. RICHMOND. / Golden Wedding Anniversary Celebrated Today—His Career a Remarkable One—Carbondale Guests.** / A number of Carbondalians are today attending the golden wedding anniversary of Mr. and Mrs. William H. Richmond of Richmond hill, Scranton. Mrs. Richmond was Lois R. Morss before marriage. William H. Richmond was born in Marlborough, Hartford county, Conn., October 22, 1821. His father, William Wadsworth Richmond, was a blacksmith and foundryman. At the age of thirteen William left school and began his career in the world. For three years he was a clerk in a grocery store at Middle Haddam, Conn; but after the panic of '37 went back to the farm. In 1842 he went to Honesdale and became a clerk in the store of R. H. More. In 1845 he opened a mercantile store in this city under the firm name of Richmond & Robinson. In 1849 he married, and in 1853 he became sole proprietor of the store. In 1860 he became a partner of Charles P. Wurts late general superintendent of the Delaware & Hudson, and began to mine coal at Dickson City. It was there he struck what brought him his wealth. In 1868 the firm was organized as the Elk Hill Coal company and a few years later Mr. Richmond owned a controlling interest. This company operated two of the richest collieries in the anthracite coal fields. Colliery No. 3 is in Dickson City, near the palatial home of Mr. and Mrs. Dickson. Colliery No. 4 is five miles above [north] of this city [Carbondale]. / Mr. Richmond was for many years a Republican, but he is now a Prohibitionist. Three daughters, graduates of Vassar—brighten his home. They are Mary Roxana, now Mrs. F. K. Tracy, Emeline K., and Clara M., all of whom will take an active part in the golden wedding celebration this afternoon and evening.” (*Carbondale Leader*, June 5, 1899, p. 5)

Biographical portrait of William H. Richmond, pp. 245-46, in *Portrait and Biographical Record of Northeastern Pennsylvania*, p. 246:

“...By his wife, formerly Lois R. Morss, he [William H. Richmond] is the father of three living children, and two are deceased. The three daughters, Roxana, Emeline K., and Clara M., received classical educations at Vassar College, from which the eldest graduated in the class of 1876...”

Here is the George L. Morss obituary from the *Carbondale Advance*, August 5, 1882, p. 3: **“Death of George L. Morss.** / It is our painful duty to record this week the death of George L. Morss, who has been widely known for about forty years as one of the prominent business men of Northeastern Pennsylvania. He died at his residence near his well-known tannery—the Lorillard—one and a half miles North of this city, on Monday, July 31st, ult. at 12:15 a.m. / Deceased was born in Windham, Greene Co., N. Y., in May, 1816, and came to this vicinity, and purchased the tannery on the Lackawanna, near town, where he has since resided, in the year 1840. Some of his brothers were at first associated with him, but subsequently went into business elsewhere, leaving him, as he has been, for more than thirty years, as sole proprietor. / Mr. Morss, beside his two brothers, Judge D. K. Morss and Wm. P. E. Morss residing here, had two other brothers: Burton G. Morss, of Red Falls, N. Y.; Capt. Dwight F. Morss, of Syracuse, N.Y.; and one sister, Mrs. Wm. H. Richmond, of Richmond Hill Farm, Scranton [emphasis added]. /He leaves four daughters: Mrs. L. S. Morss, of Ledgedale, Wayne Co.; Mrs. J. W. Aitken, of this city, and two remaining at home. / Funeral services conducted at the residence at 3 p.m., on Wednesday, by Rev. Thomas Barker, were very impressive.” (*Carbondale Advance*, August 5, 1882, p. 3)

Here are seven photographs of the Morss Mansion, Simpson, PA, that are in the Marianne Stratford Collection at the Carbondale Historical Society:



Morss Mansion on the Hill



Morss Mansion



Morss Mansion



Morss Mansion



Morss Mansion. Written on back of photo: "M. Kennedy '81"



Written on back: "Morss Mansion / Simpson / Autumn 1992"



Written on back: "Morss Mansion / Simpson / Autumn 1992"

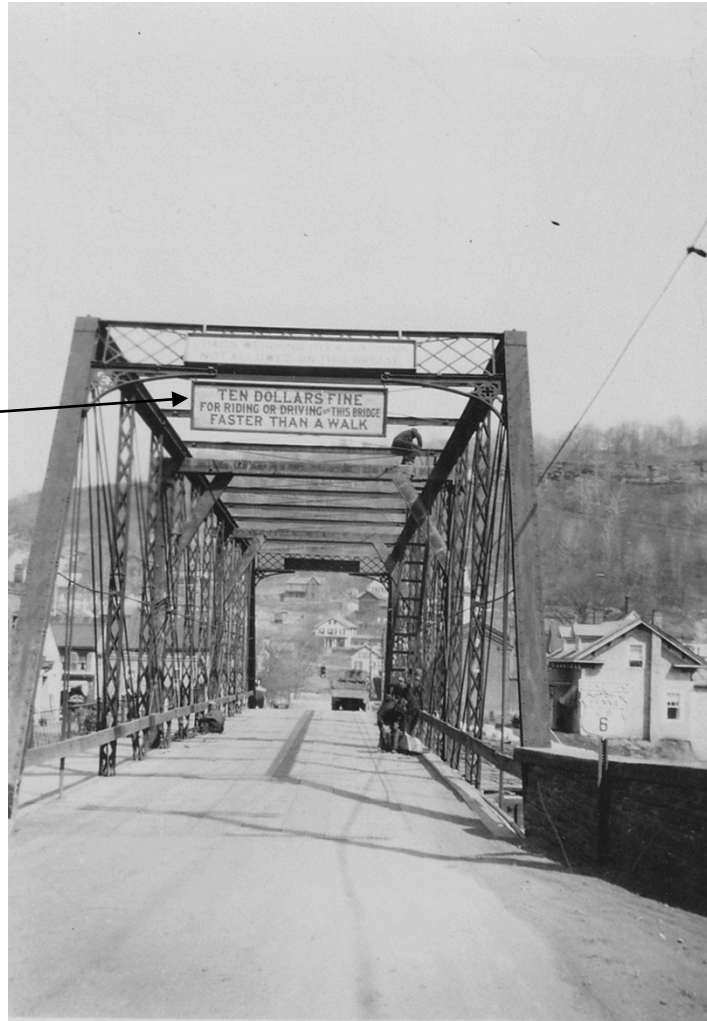
Here is a photograph of the Morss Mansion that was taken by Mick Bischak on October 9, 1978:



Morss Mansion

2. The iron bridge over the D&H Canal at Terrace Street, Honesdale.

“TEN DOLLARS
FINE for riding or
driving on this
bridge FASTER
THAN A WALK.”



Terrace Street Bridge over the D&H Canal at Honesdale. On the reverse of this photograph, the date of this photograph has been written: “April 3 1929” Photograph in the collection of the Carbondale Historical Society.

3. The Farview combination freight and passenger station at the head of Plane No. 20 was built in 1888. In *Passenger and Freight Stations Delaware and Hudson* ("Inspection of Lines, June 7-10, 1928), page 39, there is a photograph of the Farview Gravity Railroad station. The caption on the photograph reads: "Combination passenger and freight station—Gravity R. R. Built in 1888 / Located head of Gravity Plane No. 20. Sold to the State of Pennsylvania."

Additions for Volume V:

1. D&H Gravity Shops seen from the air, c. 1970. Photo by Ros-Al Studios, 56 North Main Street, Carbondale, PA 18407. This aerial photograph was made available to the Carbondale Historical Society by Nellie Connolly, Carbondale.



D&H
Gravity
Shops

2. Here is a photograph of a mule, at work, in the mines, possibly in Forest City, PA. This photograph is signed in white ink, in the lower left corner, "Bunnell" and numbered, in the lower right corner, "H 364"; photograph in the collection of the Forest City Historical Society, and made available for publication here on May 31, 2017 by Peggy Brager.



Additions for Volume IX:

1. D&H Gravity Passenger Station at Farview, PA



Farview Station during Gravity Period. Photo for sale on E-Bay on July 26, 2016

2. An important piece of service merchandize that was a necessary part of passenger service on the D&H and on all railroads was the passenger step stool. Shown below is a very sturdy D&H passenger step stool:



Additions for Volume XI:

1. Lackawanna and Susquehanna Railroad broadsheet:

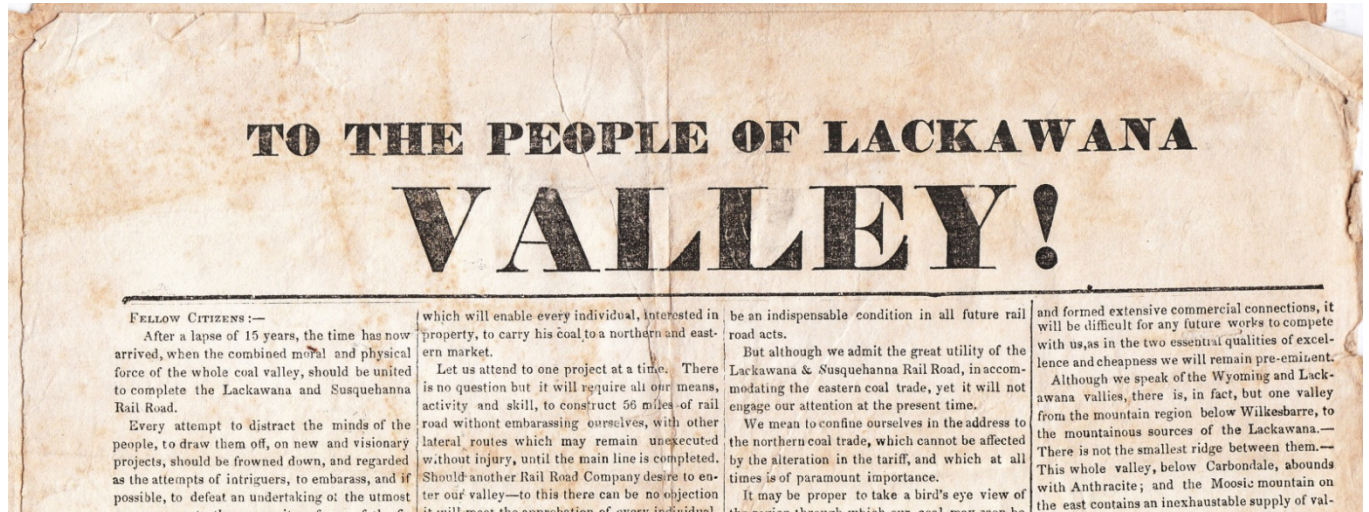
One of the early initiatives to build a rail line from Carbondale to Lanesboro proposed that the rail line be called the Lackawanna and Susquehanna Railroad. This railroad was never built. The initiative was surely overwhelmed by the Erie Railroad's entry into the game of building a rail line from Carbondale to Lanesboro. (This L&S is not to be confused with the L&S between Jefferson Junction and Nineveh, which was, in fact, built.)

In support of building this Lackawanna and Susquehanna Railroad between Carbondale and Lanesboro, a broadsheet was published, most probably in 1846 or 1847, in support of the initiative to build this rail line.

A copy of this extremely rare broadsheet was offered for sale on E-Bay in September 2016. On September 22, 2016, the Carbondale D&H Transportation Museum purchased that broadsheet. Sincere thanks to John V. Buberniak for making this important acquisition possible.

Here is that Lackawanna and Susquehanna Railroad broadsheet:

The masthead on the broadsheet:



FELLOW CITIZENS:—

After a lapse of 15 years, the time has now arrived, when the combined moral and physical force of the whole coal valley, should be united to complete the Lackawana and Susquehanna Rail Road.

Every attempt to distract the minds of the people, to draw them off, on new and visionary projects, should be frowned down, and regarded as the attempts of intriguers, to embarrass, and if possible, to defeat an undertaking of the utmost consequence to the prosperity of one of the finest coal regions in the United States.

Until the North Branch is finished, and even afterwards, this rail road will furnish another and a valuable outlet to northern markets, to our friends residing on either side of the Susquehanna river, below the mouth of the Lackawana creek. This fact is so palpable—so visible to the most common understanding, that we have a right to expect and rely on receiving all the aid which a sagacious people can bestow on a project so beneficial to the community at large.—There is no rivalry in this Rail Road, for it must be remembered that the charter of this road was obtained in the year 1826, before the North Branch Canal was in existence. We admit the importance of this canal and wish it success. It may be delayed for some time, owing to the repeal of protection on coal, under the act of 1842. But this cloud will soon pass away. A writer in the Peoples' Advocate at Montrose, under date of the 24th Sept., seems to think the North Branch Canal is defunct, and dexteriously recommends that rails should be laid upon the graded part of said canal, from Lackawana creek to Tunkhannock. He then plans a new Rail Road to run to the Salt Lick Summit, near Montrose, and thence down that creek to the Great Bend, as more useful and profitable to the Wyoming valley than any other.

This is a bold proposition—not only to abandon the Canal, but to leave the entire branch of the Susquehanna river, in favor of an inland, local route, considerably longer, with much higher grades, and in every respect inferior to the river route. If the canal is doomed, as much of it is graded, it would be cheaper, and certainly vastly better to make a Rail Road on the margin of the river, than to leave it altogether.

It would be unwise to abandon a magnificent work, which has cost the State so much money because a panic in the money market has rendered it impracticable to negotiate a loan at a moment of excitement.

Until we had a connection with some of the New York State works, it was impossible to obtain subscriptions to the stock of our Rail Road in the city of New York, or elsewhere. No man of sense would advance a large sum of money on a project which would terminate in the woods, and might remain for half a century without yielding the slightest revenue. This is a satisfactory answer to those cavallers, who, without considering this paramount cause of delay, which no activity, energy, or skill could remove, have complained of the managers of this Rail Road for not doing what was beyond their power, or the power of any other set of men. We could do nothing but submit quietly and patiently.— This delay was productive of excellent results. The Rail Road system has been improved in the most wonderful manner. A road made 15 years ago is already antiquated and comparatively useless. The edge Rail was scarcely introduced at that time—the power of locomotives did not exceed 20 tons—now its velocity has been treble, and its power extended to 1000 tons.

Grades exceeding 20 feet per mile, ~~was~~ then deemed impracticable—now 80, or even 100 feet per mile, are not inadmissible.

By waiting until this time, we will have the aid of the N. Y. & Erie Rail Road in distributing our coal over the whole extent of country, from the city of New York to Lake Erie. Besides, by adopting a similar and uniform guage, we shall be able to travel all the Rail Roads in the state of New York without transshipment, as there is a moral certainty, that all the branches will conform to the main line.

This address is now made to the people to explain the causes of delay, and to endeavor to produce unanimity of action throughout the whole extent of the Lackawana valley. United we stand, and will succeed—divided we fall. The enemies of this Rail Road are already starting other projects to lead the trade over a hilly country and abandon the upper part of the coal region. These schemes are visionary and will unquestionably prove abortive. If persevered in, they will produce lukewarmness and disunion, at a time when the greatest unanimity, energy and perseverance, are required, to penetrate the whole extent of the coal valley by an excellent Rail Road.

which will enable every individual, interested in property, to carry his coal to a northern and eastern market.

Let us attend to one project at a time. There is no question but it will require all our means, activity and skill, to construct 56 miles of rail road without embarrassing ourselves, with other lateral routes which may remain unexecuted without injury, until the main line is completed. Should another Rail Road Company desire to enter our valley—to this there can be no objection it will meet the approbation of every individual, but let such company, and the country through which it passes, find the means for making the survey, procuring the charter, and raising the funds for incidental expenses, and for its construction. This is but fair. We ask no aid from strangers who feel no interest in our road, neither would it be prudent for us to fritter ~~out~~ ^{down} our resources on colateral projects of doubtful advantage, to our own injury.

We now proceed to detail the route and distances of the Lackawana & Susquehanna Rail Road.

From Pittston to Carbondale the distance is 22 miles.

[The ascent, according to a survey made by Mr. Morgan, under the authority of the Canal Com's of Pa., was nearly 23 feet per mile.]

From Carbondale to Erie Rail road, near Lanesboro, [by one rout 33 ms., by another 37 miles,] 33 "

By Erie R. Road to Binghampton, 26 "
—
51 miles

Add dist. from Pittston to Wilkesbarre 10 "

From Binghampton to Wilkesbarre, 91 miles

The first surveys made by Mr. Seymour in 1832 was for stationary power. South of the Summit there will be three or four enclined planes, with two long levels or slopes of eight miles each—these may all be worked by water power. It is contemplated to make these and the smaller slopes of such a grade that loaded trains may descend by gravity, from the head of one plane to the foot of the next, and so on to the Summit. This mode is now adopted on the Carbondale Rail Road with complete success. The cars and return trade may be delivered from the Summit to

Carbondale by a similar process,

From the Summit, northly, to the Erie Rail Road, loaded trains may descend by self-acting planes. The loaded cars bringing up the empty ones with the return trade. This mode is now in daily operation on the Carbondale Rail Road.

I understand Mr. Archibald has said that stationary power is the cheapest mode of conveying coal to market. Such a Rail Road will cost about \$3,000 00 per mile.

As Locomotive power will unquestionably be used between Pittston and Carbondale, it became important to ascertain whether a road, suitable for such power could be made from Carbondale to the Erie Rail Road. To ascertain this point, Mr. Seymour, last year, was employed to explore the country for that purpose. After diligent search, and by careful levelling, he discovered a summit east of the former one, which satisfactorily established this position. I regret that I have not his survey before me, and that I am compelled to quote from memory. The rise in 24 miles from Carbondale to the Summit is about 40 feet to the mile, and the descent to the Erie Rail road about 60 feet per mile. This will enable a single locomotive to carry 100 tons neat, to the Summit, and descend with a train of nearly 200 tons, to the said rail road.

A single locomotive will also be able to bring up for said rail road the empty cars and all the return trade, that will be presented, for the first year or two. As the trade increases another locomotive can be added.

Such a rail road has its advantages and disadvantages. It will accommodate the passenger as well as the coal trade, but will cost double the money in its construction.

The Lackawana & Susquehanna Rail Road is intended for a public road, and every mode will be adopted to accommodate the trade of individuals. This will enrich the people of the valley.

A monopoly will be sedulously avoided, as impolitic as well as unjust. As this road will penetrate the entire Lackawana coal region, abounding with coal of the first quality, it will enable every farmer, who owns an acre of land, to carry his coal to market.

The time is not distant when rail roads will be made through Cobb's and other Gaps in the moosic mountain to the river Lackawaxen, when the coal dealer will have a choice of sending his coal to market on the Hudson, by the Delaware & Hudson Canal or the Erie Rail road. But in order to secure this choice, care must be taken to secure the 6 foot guage, or track, in all the rail roads leading out of our valley. This ought to

be an indispensable condition in all future rail road acts.

But although we admit the great utility of the Lackawana & Susquehanna Rail Road, in accommodating the eastern coal trade, yet it will not engage our attention at the present time.

We mean to confine ourselves in the address to the northern coal trade, which cannot be affected by the alteration in the tariff, and which at all times is of paramount importance.

It may be proper to take a bird's eye view of the region through which our coal may soon be dispersed.

Before the Erie Rail Road was definitely settled by the New York Commissioners, last August, at the Great Bend of the Susquehanna river, the whole country was kept in a state of agitation; for, until that question was determined, there was no absolute certainty that this road would not be abandoned.

This uncertainty kept every lateral rail road in suspense, and prevented rail road operations to a great extent.

All the leading lines will now be pushed forward with zeal and energy, and terminate on the *main track*.

By the time the Erie Rail Road is completed to the Lake, the principal central roads will be constructed and in successful operation.

1. THE SUSQ'A RAILROAD ABOVE THE GREAT BEND.—This road will branch at the Unadilla. One branch will pursue the Susquehanna river to its source in Otsego Lake, thence to Fort Plain on the Erie Canal. This is an excellent route. The distance from the Erie Rail Road will be nearly 100 miles. As Fort Plain is only about 60 miles from Albany, this will secure a large portion of the coal trade of that metropolis, to our valley, besides supplying all the intermediate country, and that lying north of the Mohawk, as far as Lake Ontario and the St. Lawrence.

2. The other branch will extend up the Unadilla to Utica. This is also a superior route.—The distance from the Erie Rail Road is about the same as to Fort Plain. Our rail road will command this trade to a certainty.

3. THE TRADE OF THE CHENANGO VALLEY.—The Chenango Canal terminates at Binghampton. This secures us an immediate market along the whole valley of the Chenango to Utica.

4. A rail road route has been explored from Binghamton by the Homer river to Syracuse, the seat of the salt trade in the state of New York. The distance from Wilkesbarre to Syracuse will be about 155 miles.

The salt villages of Salina, Syracuse, Geddes and Liverpool will require a supply of 30,000 tons of coal for the manufacture of salt. This fuel, from its cheapness, safety and economy of time, will soon supercede wood. The demand will annually increase rapidly, whenever an adequate supply can always be relied on at a cheap rate. We believe, so far, we may defy competition.

5. There is a rail road in full operation from Owego to Ithica—by means of the Cayuga Lake another immediate connection with the Erie Canal. The country opened by this rail road and canal is rich, populous, and productive.

It is from the Cayuga Lake that the principal supply of plaster is obtained, and is transported by water from Owego to the towns and valleys along the Susquehanna river. Salt and plaster will be exchanged in vast quantities for our coal, and form the mass of our return tonage. A very large portion of this trade, as well as produce will be consumed in our valley, and the residue will pass along our rail road into the N. Branch Canal.

6. CHEMUNG VALLEY AND CANAL.—Another immediate connection will be formed with the Erie Canal, by the Chemung Canal and the Seneca Lake. This will give us another admirable outlet for our coal. A rail road from the Conhocton to Canandagua will introduce our coal into the most beautiful, highly cultivated, and rich part of the state of New York.

A rail road is also projected between Corning and ~~Attica~~ *Attica*.

In this manner the vallies of the Conhocton—the Canestee—the Genessee and the Allegheny with all their tributaries, as far as Lake Erie, will, in a few years, demand and consume an immense mass of our anthracite. The time is not distant when the towns and villages on the Canada, as well as on our side of Lake Ontario, will become tributary to us for coal.

The Owego canal and rail road will contribute greatly to this result. It is therefore of vast importance to the whole of the Lackawana coal region, that our rail road should be commenced and completed with the utmost expedition, before any other work shall interfere with us. Having once established the character of our anthracite,

and formed extensive commercial connections, it will be difficult for any future works to compete with us, as in the two essential qualities of excellence and cheapness we will remain pre-eminent.

Although we speak of the Wyoming and Lackawana vallies, there is, in fact, but one valley from the mountain region below Wilkesbarre, to the mountainous sources of the Lackawana.—There is not the smallest ridge between them.—This whole valley, below Carbondale, abounds with Anthracite; and the Moosic mountain on the east contains an inexhaustable supply of valuable iron ore. This ore is now worked extensively at Harrison village, and makes excellent pig and bar iron.

It only requires a thoroughfare through this valley, to bring its iron and coal into immediate notice and use.

Carbondale, only 15 years old, contains 5,000 inhabitants. The same causes will produce similar effects. New mines will be opened—new furnaces will be built, and each large establishment will soon become the nucleus of a new village. Manufactories of cotton, wool, &c., will thrive where coal, water power and iron are abundant, and the raw material can be procured cheaply. The population will rapidly increase. Saw mills—grist mills, and machinery of every description will be demanded. In a few years the whole appearance of the extensive valley will be changed. The hum of business will pervade every part of it, and a dense population receive constant employment, and ample remuneration. The farmers of the surrounding country will find numerous customers and high prices for their produce.

This valley, from its extent and from the other circumstances already aluded to, will afford to the inhabitants of the state of New York, never-failing and excellent cash markets for their produce—their lime, salt, plaster and other minerals. There will be no danger of over-stocking these markets, as the surplus will be conveyed to and sold on the Delaware and Susquehanna rivers. There are no minerals on the waters of Tunkhannock and Wyalusing creeks—there is nothing upon which thrade can operate extensively.—A rail road through this region may accommodate a small section, but can never interfere with so populous, rich and flourishing a country as ours, unless we remain spiritless and inactive.

The Lackawana & Susquehanna Rail Road Company is prepared for immediate action. An excellent charter has been obtained, and the time for commencing the work has lately been extended until April 1856. This Company is authorised to hold 2000 acres of coal land, and to make such lateral roads as may be convenient and useful. Its capital is ample, and its general powers extensive.

Although this company has made two instrumental surveys and amply demonstrated the feasibility of a rail road, either for stationary or locomotive power, still an elaborate survey and examination of both these routes, and a detailed report, pointing the out superiority of one over the other, by an Engineer of high standing and character, well known and esteemed in the city of New York, is absolutely necessary, to command the attention of capitalists, and insure the subscription of the stock of said Company. Such a report would go fully into the subject, and embrace every important item. The length—the grades—the cost of construction—the incidental expenses—the revenue—the annual expenditure and the estimated dividends.

It is easy to be perceived that much experience and talent are required to place all these matters in a fair and full point of view, so that they may make a favorable impression on the minds of men, captious, and difficult to be convinced of the propriety of investing large sums of money in a distant project in another state.

This company is at present without funds—delay is dangerous—other rail road projects vastly inferior to our own, are afloat, and will be pushed forward with ardor this fall—if we are inactive some of these may succeed and embarrass, or defeat our operations for several years. It is always dangerous to undervalue competitors.—Energy, skill and a timely expenditure of money, are always required to explain, and defeat the arguments of our opponents, and place our own schemes fully before the public.

Many friends have proposed calling a meeting to explain the object of this valley rail road, and procure subscriptions to make an elaborate survey, and report in the manner proposed, and procure subscriptions to the stock of said company, in the city of New York or elsewhere. A slight subscription by the farmers, merchants, miners and laborers, would raise a considerable sum, perhaps adequate to this undertaking.

AGRICOLA.

Printed by SISTY & BALDWIN, Transcript office,
Wilkesbarre, Pa.

2. The Passenger depots on the Jefferson Branch from Carbondale to Lanesboro Junction:

In the twentieth century, the Erie did not have a station of its own in Carbondale; it used the D&H Seventh Avenue passenger station.

Given below are photographs of the passenger depots on the Jefferson Branch between Carbondale and Lanesboro Junction (Forest City, Union Dale, Herrick Centre, Ararat, Thompson, Starrucca, and Brandt) that are given in “The Next Station Will Be. . . An Album of Photographs of Railroad Depots in 1910 A Railroadian Book – 1982 Volume VII” (Marianne Stratford Collection, Carbondale D&H Transportation Museum). These photographs were all taken in 1910 by J. E. Bailey.

From the caption on the photograph of the Forest City depot (also from the 1911 timetable given below), we learn that three Erie and two D&H passenger trains were run daily over the Jefferson Branch between Carbondale and Lanesboro Junction.

Forest City Passenger Depot



M.P. 32.70

Deep in the heart of the coal regions FOREST CITY was a stop for three passenger trains on the Erie and two on the D. & H.

Union Dale Passenger Depot



M.P. 27.51
Evidently a photographer was a bit out of the ordinary to the natives of UNIONDALE.

Herrick Centre Passenger Depot



M.P. 23.72

The agent can be seen watching the camelback locomotive arrive with the local freight at HERRICK CENTER. A portion of an old hand operated trackman's velocipede is visible behind the barrels.

A *trackman's velocipede* (also known as a *pump trolley* or a *pump car*) is a railcar that is powered by its passengers or by people pushing the car from behind. It is used mostly as a maintenance of way car, although sometimes used as a passenger vehicle.



Ararat Passenger Depot



M.P. 19.00

The highest point on the Jefferson division, 2,025 feet above sea level, was here at ARARAT, the top of the famous Ararat grade.

Thompson Passenger Depot



M.P. 14.19

No more consignments will arrive at THOMPSON, as track removal of the entire division began in April, 1982.

Starrucca Passenger Depot



M.P. 10.47

Agent O.P. Beardslee answered to the telegraph call KA at STARRUCCA, a day and night telegraph station ten miles south of the famous viaduct of the same name.

From the caption give here for the Starrucca depot, we learn that

- there was a telegraph line along the Jefferson Branch
- the telegraph operator at Starrucca was O. P. Beardslee
- the Starrucca telegraph call letters were KA
- the Starrucca telegraph station operated day and night

Brandt Passenger Depot



M.P. 4.23 from Susquehanna

Both Delaware & Hudson and Erie trains stopped at BRANDT, first station after Jefferson Jct. where the two roads joined to form the line into the coal fields at Carbondale.

3. Erie Timetable, 1911, Susquehanna/Carbondale and Lackawaxen/Honesdale passenger trains

SUSQUEHANNA AND CARBONDALE.											
WESTBOUND.						EASTBOUND.					
		122	D & H 4	180	Miles.	Eastern Time. 6-17-'11.		D. & H. 7 Erie 121	108	Sun. 129 Only.	
		A.M.	P.M.	A.M.		Leave	Arrive	P.M.	A.M.	A.M.	
		*8.50		+12.35		N. Y., 23d St.		+4.15	+7.30	+7.30	
		*9.00		+12.45		N. Y., Chamb. St.		+4.12	+7.15	+7.15	
		P.M.	P.M.	A.M.		Leave	Arrive	Note.	A.M.	P.M.	P.M.
		*3.55		+9.20	0	Susquehanna		+10.00	+7.55	+8.05	
		4.00		+9.25	2	Lanesboro		9.55	7.49	8.00	
		4.08	+2.45		5	Brandt		9.47	7.41	7.52	
		+4.11	+2.48		6	Stevens' Point		+9.45	+7.37	+7.48	
		4.24	2.59		11	Starrucca		9.36	7.26	7.37	
		4.32	3.07		15	Thompson		9.28	7.16	7.27	
		4.45	3.18		19	Ararat		9.19	7.05	7.16	
		+4.52			23	Burnwood		+9.12	+6.58	+7.08	
		5.00	3.32		26	Herrick Centre		9.06	6.51	7.01	
		5.05	3.36		28	Unondale		9.02	6.46	6.56	
		5.19	3.46		33	Forest City		8.52	6.35	6.45	
		*5.35	+4.00		40	Carbondale		+8.40	+6.20	+6.30	
		P.M.	P.M.	A.M.		Arrive	Leave	A.M.	P.M.	P.M.	
LACKAWAXEN AND HONESDALE.											
WESTBOUND.						EASTBOUND.					
		Sun. 279 only.	27 Note.	295	267 Note.	Miles.	Eastern Time. 6-17-'11.		28 Note.	292 Note.	294
		P.M.	P.M.	P.M.	A.M.		Leave	Arrive	A.M.	P.M.	P.M.
		+2.35	+2.00		+8.50		N. Y., 23d St.		+11.45	*7.45	
		+2.45	+2.15		+9.00		N. Y., Chamb. St.		+11.37	*7.27	
		+6.10	+5.56		+12.40	0	Lv. { Lack- } Ar.	+8.18	*4.00		
		6.18	6.04		12.48	5	{ awaxen }	8.09	3.51		
		6.26	6.12		12.56	8	Rowlands	8.02	3.43		
		6.34	6.20		1.04	12	Glen Eyre	7.53	3.34		
		6.42	6.28		1.12	16	Kimble	7.45	3.26		
		6.50	6.35	+3.30	1.20	16	Hawley	7.43	3.24	+6.30	
		6.58	6.43	3.38	1.28	20	West Hawley	7.32	3.09	6.12	
		7.07	6.52	3.47	1.37	24	White Mills	7.23	3.00	6.03	
		+7.10	+6.55	+3.50	+1.40	25	East Honesdale	+7.20	*2.57	+6.00	
		+9.12			+6.20		Ar. Honesdale Lv.				
		P.M.	P.M.	P.M.	P.M.		Scranton (D & H)		+7.45		
							Arrive	Leave	A.M.	P.M.	

NOTE.—Trains 267 and 27 will stop to let off passengers, and Trains 292 and 28 will stop on signal at Shimer's Rock Cut (near Glen Eyre) for New York passengers only.

→ **PULLMAN PARLOR CAR**
BETWEEN NEW YORK AND HONESDALE.
 Daily except Sundays. Westward on Train 27. Eastward on Train 28.

"Passengers on D & H Train 7 transfer to Erie Train 121 at Jefferson Junction (between Brandt and Lanesboro)"

Pullman Parlor Car service was available New York to Honesdale, beginning in 1910.

Erie passenger service on the Jefferson Branch into and out of Carbondale came to an end in 1933.

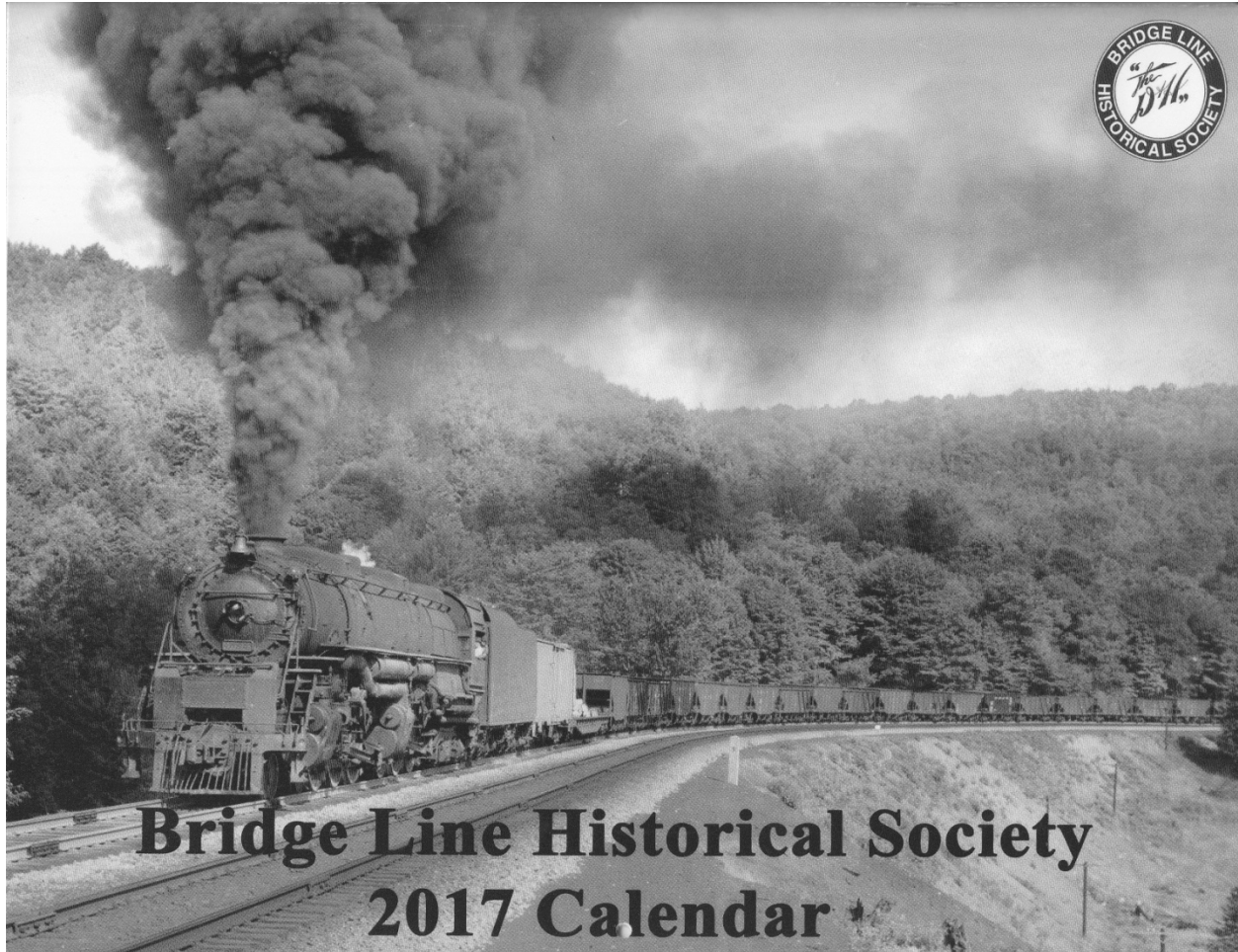
4. The Sink Hole at Ararat Summit, and the grade to Ararat Summit

In “The Next Station Will Be. . . An Album of Photographs of Railroad Depots in 1910 A Railroadian Book – 1982 Volume VII” (Marianne Stratford Collection, Carbondale D&H Transportation Museum), we read the following about the sink hole on the Jefferson Branch near Ararat Summit:

“The road [Carbondale to Lanesboro Junction] was long, crooked and had heavy grades. A costly and delaying obstacle encountered [in the building of the line] was the ‘sink hole’ near Ararat Summit. The rails had been put down and cars run over that stretch of track, when one night a quarter of a mile of the rails and road bed disappeared entirely, leaving a large quagmire on the spot. 100,000 tons of gravel, 500 large hemlock trees, branches and all, were thrown in without having any perceptible effect toward forming a bottom upon which a new road could be built. / Piles were then driven, one on top of the other, before solid bottom was reached at 160 feet. Next, a row of piles was driven on both sides of the space for the road bed, so close together that 8,000 were needed. It took four months to fill the hole with gravel, rocks and trees. The railroad was completed in October, 1870. . . The grade began at the north end of the [Carbondale] yard and rose from 1,000 feet above sea level at Carbondale to 2,030 feet at Ararat, the summit. The climb was not gradual for the entire distance. The first 6.3 miles rise to Forest City was a climb of 410 feet; the 5.5 miles to Uniondale was a 215 foot rise, with only a 75 foot rise in the 1.5 miles to Herrick Center. The last seven miles to Ararat rose 260 feet.”

5. D&H Challenger 1534 Southbound at Starrucca, June 1952

Shown below is a photo by Robert F. Collins showing D&H Challenger 1534 leading D&H train RW-4, southbound at Starrucca, June 28, 1952. This photo, which is in the BLHS Archives in the Jack MacDonald collection, is the cover photo on the 2017 Bridge Line Historical Society calendar.



About this photograph, Steve Wagner (“Media in Review,” *BLHS Bulletin*, September 2016, p. 19) says the following: “I especially like the cover photo [of the 2017 BLHS Calendar], taken at Starrucca, PA in June 1952 by Robert F. Collins, showing D&H Challenger 1534 hauling train RW4 around a curve. I can’t tell whether it’s going upgrade or downgrade, but since the train is southbound, the hoppers must be mostly empties, easing its work somewhat. Am I right that the volume of smoke indicates that the engine is working fairly hard? / The first two cars behind the loco are a reefer and a flatcar, but the next 19 are all open hopper cars. Nine of them are composite hoppers, with many wooden parts—the giveaway is that some of their side braces are slanted. Three or four of the others are ribbed fish-belly hoppers that the D&H bought from Bethlehem Steel Car, at least some as ‘kits’, in the late 1930s. The darker color of one steel hopper wearing a road name and a round herald demonstrates that the older cars are all considerably weathered; or, in some cases, perhaps wearing the boxcar red paint the D&H apparently used on them before World War II.”

6. Erie Railroad Passenger Station at Susquehanna Depot

The distance was short between the northern end of the Jefferson Branch of the Erie from Carbondale to Lanesboro (Lanesboro Junction) and the terminus of the Erie's Delaware Division (Susquehanna).

At Susquehanna, in 1863, the Erie built its wholly remarkable passenger station. The station, which was three stories high, 327 feet long, and 40 feet wide, was the first brick railroad passenger station in America.

Here is the photograph of that station that is given in "The Next Station Will Be. . . An Album of Photographs of Railroad Depots in 1910 A Railroadian Book – 1982 Volume VII" (Marianne Stratford Collection, Carbondale D&H Transportation Museum). The photograph was taken in 1910 by J. E. Bailey.



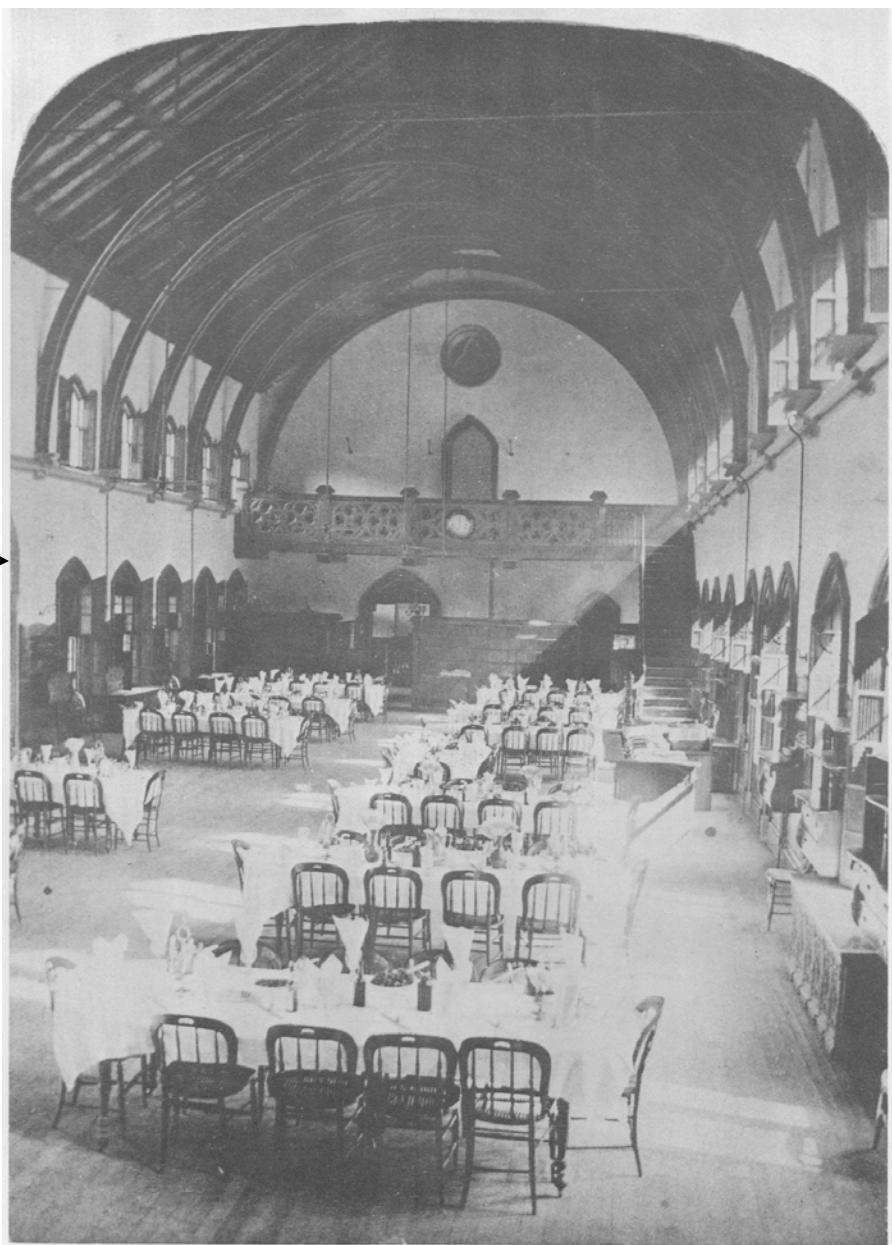
M.P. 191.6

The first brick passenger station in America was at SUSQUEHANNA. Three stories high, 327 ft. long and 40 ft. wide. When it was built in 1863 it contained a large dining room as trains did not have dining cars. Part of the building was used as a hotel and known as the "Starrucca House." The Delaware Division ended here.

Erie Railroad Passenger Station, Susquehanna, PA. Photo taken in 1910 by J. E. Bailey.

Here is the photograph, by William S. Young, of the dining room of the Susquehanna station. This photo is presented in "The Next Station Will Be. . . An Album of Photographs of Railroad Depots in 1910 A Railroadian Book – 1982 Volume VII" (Marianne Stratford Collection, Carbondale D&H Transportation Museum).

Dining room,
Susquehanna
station: 125
feet long, 40
feet wide, with
a 36-foot high
arched ceiling



The famous dining room of Susquehanna station.

Courtesy of William S. Young

In the nineteenth century, the Erie established a hotel (with rooms for 200 people), called the Starrucca House, in the building by adding two stories of rooms in the great hall, shown on the preceding page. In 1902, the Erie converted the hotel into offices and sleeping quarters for railroad personnel. Additional alterations to the station were made in 1913 and 1917.

Here are four additional photographs of this remarkable Erie Railroad passenger station at Susquehanna:



Erie Railroad Station, Susquehanna, PA. Post card in the collection of the Carbondale D&H Transportation Museum.

Two photographs of the Erie Passenger Station, Susquehanna, by the late Marianne Stratford, Forest City, PA. Both photographs are now in the collection of the Carbondale D&H Transportation Museum.



The Erie owned this remarkable building until 1960, when the Erie merged into the Erie Lackawanna Railroad, which ended passenger service over the former Erie Delaware Division in 1966. All remaining passenger service on the former Lackawanna route via Scranton, PA, was discontinued on January 6, 1970. The Susquehanna station was listed on the National Register of Historic Places in 1972.

The Susquehanna station was ultimately acquired by Susquehanna businessman, Michael J. Mathis, who bought the building for \$3,500 and then spent \$300,000 renovating the building (which included removing the two stories of rooms in the great hall).

Here is a photograph of the renovated Susquehanna station that was taken in 1990 by Marianne Stratford (photo now in the holdings of the Carbondale D&H Transportation Museum):

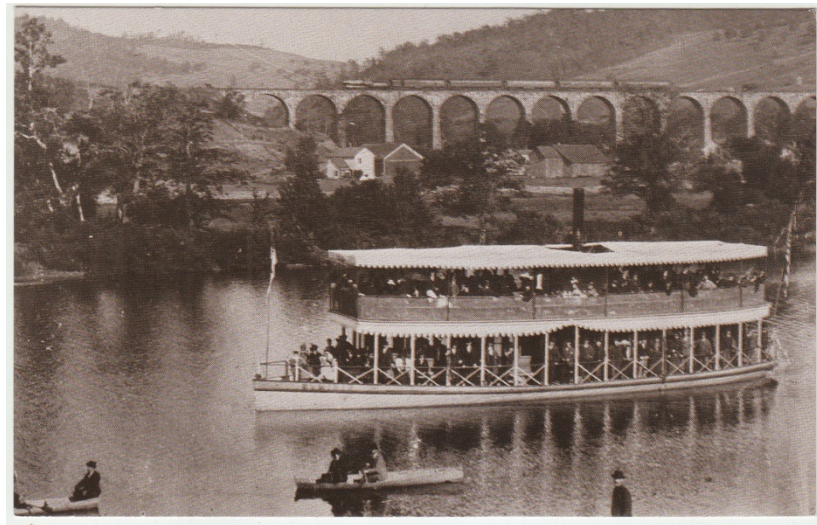


Renovated Erie Station, Susquehanna, PA, 1990. Photograph by Marianne Stratford.

Two miles East of the Erie's remarkable passenger station at Susquehanna Depot stands another astonishing structure built by the Erie, the Starrucca Viaduct. Here are two post card views of the Starrucca Viaduct. Both are in the Marianne Stratford collection of the Carbondale D&H Transportation Museum.



“Stone Bridge and Pushers LANESBORO, PA.” Printed on the reverse of the post card shown above is the following: No. 204 Art-tone series by C. D. Burton, Lanesboro, Pa. Printed in Germany.



“The Steamboat Ermine on the Susquehanna River at Lanesboro. Starrucca Viaduct in the Background.” Built in 1895, it burned at the dock in 1900.

An important work on the Starrucca Viaduct is William S. Young's *Starrucca The Bridge of Stone* (1986, 36 pages, privately published).

A very good article on the bridge, titled "The Starrucca Viaduct," was reprinted on pp. 43-44 of the December 2015 issue of the *Bridge Line Historical Society Bulletin*.

For the record, here are some interesting facts about this remarkable stone bridge, most of which we have learned from Stone's work on the bridge:

Starrucca Viaduct:

- Designed by Julius Walker Adams, who was born in Boston on October 18, 1812
- Built by James Pugh Kirkwood, who was born in Edinburgh, Scotland on March 27, 1807, came to America in 1832; Kirkwood was the brother-in-law of Julius Adams.
- Construction of the bridge was begun in the spring of 1847 and was completed on November 23, 1848; the first locomotive to cross the bridge did so on December 9, 1848. The bridge is sometimes referred to as *Bridge 189.46* (the old mileage from Jersey City).
- The Starrucca Viaduct was built at a cost of about \$335,000. It is 1,200 feet long, 110 feet high, 30 feet wide at the top, and has 17 arches, each 50 feet across.
- The fine-textured sandstone (locally called bluestone) to build the bridge came from a quarry at Stevens Point.
- The grade on the bridge, from South to North, is 60 feet per mile: the north end of the bridge is 12 feet higher than the south end.
- "Recently [c. 1986] there have been other operating restrictions [to railroad personnel regarding the Starrucca Viaduct], including this stern injunction in the employees' timetable: BRAKES MUST NOT BE APPLIED OR SPEED CHANGED ON THE STARRUCCA VIADUCT EXCEPT IN CASE OF EMERGENCY." (*Stone*, p. 31)
- "... in the two world wars the viaduct was thought of as too essential to be left unguarded. It was watched during the First World War by Army troops who camped in tents at Lanesboro, and during the Second World War by the railroad's own guards—one of whom was run over by a train." (*Stone*, p. 32)
- James Kirkwood was appointed chief engineer of the Albany & Susquehanna Railroad in 1852.

7. D&H Pushers at Lanesboro Junction

BLHS Bulletin, November 2016, p. 24: “D&H U33C ‘Baby Huey’ pushers at Jeff Junction, Lanesboro, Pa.: September 8, 1985 photo by Tom A. Gillen. The burst of activity at Jeff Junction was due to Belden Hill Tunnel being closed for enlargement”



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8. “*THE DELAWARE AND HUDSON COMPANY and ERIE RAILROAD COMPANY / Supplemental Agreement Covering Operation and Maintenance of Jefferson Branch of Erie R. R. / Dated February 8, 1917*” (purchased on E-Bay, March 13, 2017; our thanks to John V. Buberniak for bringing this important text to our attention and for handling the purchase, from a vendor in Half Moon Bay, CA).

The object of this supplemental agreement between the Delaware and Hudson Company and the Erie Railroad Company is as follows:

According to the agreement entered into by the D&H and the Erie on January 1, 1898, the Erie agreed to furnish the D&H with a double-track line of railroad connecting their railroad system in Pennsylvania with the D&H's Lackawanna and Susquehanna Railroad and the D&H leased lines in the state of New York, over which connecting line D&H traffic should pass in either direction freely and without restriction. The Erie would maintain and operate the tracks. The D&H, by paying specific fees, would have trackage rights over the line.

According to the supplemental agreement entered into between the D&H and the Erie on February 8, 1917, the D&H would maintain and operate the tracks between Jefferson Junction and Carbondale, for and on behalf of the Erie, and the Erie would reimburse the D&H the costs associated with the maintenance and operation of the line.

Here is the complete text of the February 8, 1917 agreement between the D&H and the Erie regarding the Jefferson Branch from Carbondale to Jefferson Junction:

THE DELAWARE AND HUDSON COMPANY

and

ERIE RAILROAD COMPANY

Supplemental Agreement Covering Operation
and Maintenance of Jefferson Branch
of Erie R. R.

DATED FEBRUARY 8, 1917

THIS AGREEMENT made in duplicate this 8th day of February in the year one thousand nine hundred and seventeen, effective as of February 7th, 1917, by and between THE DELAWARE AND HUDSON COMPANY, formerly bearing the title of "the President, Managers and Company of the Delaware and Hudson Canal Company," and hereinafter called "The Delaware Company," party of the first part, and the ERIE RAILROAD COMPANY, hereinafter called the "Erie Company," party of the second part; supplemental to the contract of January 1, 1898, therein mentioned.

WITNESSETH, that

WHEREAS, the Erie Company operates and controls a line of railroad, a part of which extends from Carbondale to Jefferson Junction in the State of Pennsylvania, and

WHEREAS, under an agreement dated January 1, 1898, the Erie Company granted to the President, Managers and Company of the Delaware and Hudson Canal Company (now The Delaware and Hudson Company) certain trackage rights over that part of the aforesaid line of railroad between Carbondale and Jefferson Junction in the State of Pennsylvania, a distance of thirty-four and six-tenths ($34\frac{6}{10}$) miles, and

WHEREAS, the object of the said agreement dated January 1, 1898, as said object was stated in said agreement, was to furnish said Delaware Company with a double track line of railroad connecting their railroad system in Pennsylvania with their Lackawanna and Susquehanna Railroad and their leased lines in New York State, over which connecting line their traffic should pass in either direction freely and without restriction

and from which it could not be excluded by reason of any adverse interest at any time thereafter obtaining control of the Erie Company's lines, and

WHEREAS, The Delaware Company wishes to obtain the further privilege of maintaining and operating the said tracks between Carbondale and Jefferson Junction in the State of Pennsylvania, for and on behalf of the Erie Company, and the Erie Company is willing to grant such privilege under certain terms and conditions hereinafter set forth;

NOW THEREFORE, in consideration of the terms and covenants hereinafter expressed, to be mutually kept and performed by the parties hereto, the Erie Company, so far as it lawfully may, licenses and permits The Delaware Company to operate and maintain said lines of railroad between Carbondale and Jefferson Junction in the State of Pennsylvania, hereinafter referred to as the "Jefferson Branch" for and on behalf of the Erie Company and as its agents and at the cost of the Erie Company as hereinafter provided; The Delaware Company undertakes and agrees to take charge of the maintenance and operation of said line of railroad for and on behalf of the Erie Company and as its agent; and it is agreed by and between the parties that the terms and conditions under which said maintenance and operation shall be exercised and performed shall be as follows:

MAINTENANCE.

(a) The Erie Company shall turn over to The Delaware Company said Jefferson Branch including all the buildings, bridges, track materials, tools and appurtenances upon or belonging thereto, listed on the statements attached hereto marked "Exhibit A" and hereby made a part hereof; The Delaware Company shall there-

upon become and be responsible in all respects for the maintenance, care and management of said Jefferson Branch during the continuance of this agreement, and upon the termination thereof in the manner hereinafter provided shall deliver up the same to the Erie Company in as good order and condition as when received, ordinary wear and tear excepted.

(b) The Delaware Company, for and in behalf of the Erie Company and as its agent, shall maintain in the manner and during the period hereinafter provided, all main, passing and other tracks, and all buildings, bridges, tools, structures and appurtenances of whatsoever character upon or belonging to said Jefferson Branch (other than the telegraph lines of the Erie Company) and shall provide and furnish all material and labor necessary therefor, except as is otherwise provided for herein. The Erie Company shall bear and pay the entire cost of the maintenance of said Jefferson Branch.

(c) The Delaware Company shall keep correct and proper accounts and records of all labor and material used in the maintenance of said Jefferson Branch; said accounts and records shall be kept in such a way that they may readily be checked and audited by such representative as the Erie Company may designate from time to time, and the Erie Company shall have access thereto at all reasonable times for the purpose of verification.

(d) On or before the first day of November of each year the Chief Engineer of The Delaware Company shall submit to the General Manager of the Erie Company or such other officer as it may designate for approval, a statement of the quantities of rails, ties and ballasts to be renewed or applied during the succeeding calendar year. Said General Manager or other officer designated by the Erie Company shall indicate his approval or dis-

approval of said statement within sixty days from the date said statement is submitted and if said statement shall be approved, the said Chief Engineer shall proceed to furnish and provide said materials as required. No items in such statements shall be furnished and procured unless approved by the General Manager or other officer designated by the Erie Company; provided, however, that if said General Manager or other officer shall fail to notify said Chief Engineer of either his approval or disapproval of the said quantities named in said statement within said period of sixty days the Chief Engineer may proceed in the same manner as though said statement had been actually approved.

(e) All bridge and other structures shall be constructed and maintained strictly in accordance with Erie Standards, approved by the Chief Engineer of the Erie Company or other officer designated by the Erie Company; and standards for other materials for the maintenance of said Jefferson Branch including rails, frogs, switches, ballasts, and other track material shall first be approved by such Chief Engineer or other designated officer. Station and building repairs shall conform to existing conditions.

(f) No part of the salary or wages of any officer of higher grade or rank than track supervisor shall be charged against the cost of maintenance to be borne and paid by the Erie Company. Necessary engineering and superintendence shall be furnished by The Delaware Company without expense to the Erie Company. The Delaware Company shall make no proportionate charge for its general expense, except that the time of bridge and other engineers and inspectors in making inspection, preparing plans or staking out work for renewals shall be a proper charge against said cost of maintenance.

(g) The Delaware Company so long as this agreement shall continue in effect, shall protect said Jefferson Branch and all the facilities and property which it is to maintain or operate hereunder, against trespassers and shall protect and defend said Jefferson Branch and said facilities and property against encroachments of any and every kind.

(h) If at any time the Erie Company shall not feel satisfied with the manner in which The Delaware Company maintains its Jefferson Branch it shall notify The Delaware Company, specifying in what respects or particular such maintenance is unsatisfactory, in which event it shall be the duty of The Delaware Company at once to bring the maintenance of said Jefferson Branch in each and every respect and particular to conform to the standard desired by the Erie Company, provided such standard is not below that required for the proper operation of the trains of The Delaware Company.

(i) Each company at its own sole cost and expense shall furnish all materials and labor for and shall maintain its own telegraph and telephone lines along and upon said Jefferson Branch; provided, however, that The Delaware Company shall, at the expense of the Erie Company, make such temporary repairs to the telegraph and telephone lines of the Erie Company upon and along said Jefferson Branch as are ordinarily made by section men.

ADDITIONS AND BETTERMENTS.

No additions or betterments shall be undertaken on said Jefferson Branch except by the Erie Company or with its prior written consent thereto.

If any additions and betterments are undertaken and performed by The Delaware Company with the consent

of the Erie Company, the Erie Company shall reimburse The Delaware Company for the actual cost of the material and labor necessary therefor plus ten per cent (10%) for supervision and use of tools, provided that said ten per cent. (10%) shall not be added to the actual cost of labor when such additions and betterments are performed with the regular maintenance forces of The Delaware Company; and all additions and betterments so made shall be and remain the property of the Erie Company.

OPERATION.

(a) The Delaware Company during the continuance of this agreement shall have charge of the operation of said Jefferson Branch for and on behalf of the Erie Company and as its agent and shall be responsible therefor in every respect and particular and shall make all timetables for the government of train movements over said Jefferson Branch upon agreement between the superintendents of the Erie and Delaware Companies. The train rules of The Delaware Company shall be used exclusively in the operation of said Jefferson Branch and all employees and agents, whose duties shall require them to be proficient in train rules shall be required to pass such an examination on The Delaware Company's said rules as shall be satisfactory to the superintendents of the Erie and Delaware Companies.

(b) Dispatching of trains shall be under the direction of The Delaware Company and it shall employ all dispatchers.

(c) The Erie Company shall retain its right to run its own trains, cars or engines over said Jefferson Branch and to grant to others the right to run trains, cars and engines thereon to the same extent as it may now have such right and to exercise all rights of ownership thereon

subject only to the provisions of this contract and any other rights of The Delaware Company prior thereto.

The operation of all such trains, cars or engines is to be subject to the reasonable and proper timetables and reasonable and proper dispatching regulations established by The Delaware Company.

Except as is otherwise provided for herein, each party shall furnish engines and crews for its own trains operated on said line of railroad.

(d) In joint territory on said Jefferson Branch there shall be no discrimination in the movement of trains of the same class or character and the trains of each party shall have equal rights and privileges, and shall be subject to the same conditions and restrictions as trains of the same class or character of the other party.

(e) All pusher and work train engines on the Jefferson Branch shall be furnished by The Delaware Company. The Erie Company shall be charged with and pay the estimated actual cost per pusher or work engine mile for each engine mile made in its service. Said cost shall be agreed upon by the respective Superintendents of Motive Power of the parties hereto, or such other mechanical officers as said parties may designate hereafter, and shall include among other things, interest on the investment, depreciation, repairs, wages and supplies. If requested by either party the cost of such engine service shall be readjusted on January first of each year, or at any other time when power is changed.

Until such time as either party requests a readjustment the following prices shall prevail:

Consolidation engines, 64 cents per engine mile,
Mallet engines, \$1.04 per engine mile.

Provided, however, that the Erie Company shall have the option at any time of furnishing its own pusher service for the operation of its trains.

(f) The Delaware Company shall furnish terminal facilities for engines of the Erie Company at Carbondale, and the Erie Company shall furnish similar facilities at Susquehanna for the engines of The Delaware Company if necessary, and if it can be done without extending the facilities of the furnishing company. Charges to be made for the use of such facilities shall be agreed upon by the respective Superintendents of Motive Power of the parties or such other mechanical officers as said parties shall designate hereafter, and shall be based as nearly as possible upon the actual cost thereof to the company providing the facilities. Said cost shall include among other things interest on the investment, depreciation, repairs, wages and supplies and said charges shall be subject to revision on the first day of January, April, July and October of each year, in the event of increased tractive power of locomotives, or increased prices for labor or material.

Until otherwise changed, such charges shall be as follows:

Each engine arrival.....	\$1.50
Coal, valve oil, engine oil, signal oil, to be charged for at cost, plus 15% to cover shrinkage, labor, handling, interest, etc.	
Water	(per tank) 0.24
All repairs at cost plus 10%.	

(g) The Delaware Company, in case of accident shall clear the track, but may call upon the Erie Company for assistance when necessary. The Erie Company, however, shall not be bound to furnish such assistance if its wrecking equipment is needed elsewhere or other causes prevent it from so doing. Equipment furnished by either company in such cases shall be at the following rates:

(Time shall be computed from the time equipment leaves shop or holding place until it is returned.)

Wages of train crews and laborers plus 15% for supervision.

Locomotives all classes \$1.50 per hour.

Derricks \$25.00 per day of 24 hours.

Derricks, per hour \$4.00

If out from 24 to 36 hours charge 1½ days.

If out from 36 to 48 hours charge 2 days.

Tool cars, cabooses, etc..... \$1.00 per day.

Such prices shall be subject to revision on the first day of January, April, July and October of each year, in the event of increased tractive power of locomotives, or increased prices for labor or material.

(h) Employees engaged solely in handling orders covering the movement of trains shall be employed by and under the supervision of The Delaware Company.

(i) Agents and all other station employees except telegraph and block signal forces shall be appointed and paid by the Erie Company, but shall report to and be under jurisdiction of The Delaware Company in matters relating to train movements only.

(j) All agents and other station employees, operators and block signal men employed on said Jefferson Branch shall be carried on the payrolls of and shall be paid by the Erie Company. The Erie Company, at its own expense, shall furnish all material and supplies for block signal, telegraph and station service, such as office furniture, trucks, stationery, oil waste, lamps, stoves, coal, etc.

(k) Cars in the service of either of the parties hereto not the property of such party while on said Jefferson Branch, shall be deemed to be on the railroad of such party and charges for use of cars per diem or per mile or such other method of charge as shall be in force from time to time shall be recorded and reported and collected and paid by such party.

(l) Tonnage of freight trains shall be so regulated as not unduly to interfere with the movement of trains of either road.

MISCELLANEOUS.

(a) All loss, damage or injury to persons or property occurring on said Jefferson Branch, and all claims for or on account of personal injuries or damage to property occurring on said Jefferson Branch, shall be borne and paid by the respective parties in accordance with the provisions in the aforesaid agreement of January 1, 1898, which shall be, and the same hereby are extended so as to apply to and cover the rights, duties and obligations of the respective parties under this agreement. Each of the parties hereto assumes and agrees to indemnify and save harmless the other party hereto from and against all claims and demands for injuries to persons or loss of or damage to property in each and every case where such party is or agrees to be responsible therefor under the provisions of the agreement of January 1, 1898, and of this agreement: Provided, however, that The Delaware Company hereby assumes, and agrees to indemnify and save harmless the Erie Company from any and all loss, damage or injury resulting from or in anywise connected with the failure or neglect of The Delaware Company to keep and maintain said railroad, its tracks, switches, buildings, bridges, tools, structures, and ap-

purtenances of whatsoever character, in a safe, adequate, and proper condition during the term of this agreement.

(b) The Delaware Company shall be responsible for the care and preservation of all existing water rights now enjoyed by the Erie Company on said line of railroad and any others which it may secure hereafter and shall safeguard and protect them against impairment or diminution while this agreement continues in effect. Water bills shall be rendered against the Erie Company and shall be checked by The Delaware Company if necessary or desired by the Erie Company.

(c) The Delaware Company's maintenance force shall harvest ice along said line of railroad for the Erie Company at cost. Said work shall be done with such expedition and the ice so harvested shall be in such quantities as shall be necessary to meet the requirements of the Erie Company.

(d) This agreement is supplemental to the said agreement dated January 1, 1898, and shall not modify said agreement or abridge any of the rights of either party thereunder except as is specifically set forth herein.

(e) This agreement may be terminated at any time by giving six (6) months' notice in writing; until so terminated it shall be binding upon the parties hereto and their respective successors, lessees and assigns so long as said agreement of January 1, 1898, shall remain in effect and it shall terminate without notice coincidently with the termination of said agreement of January 1, 1898. The termination of this agreement prior to the termination of said agreement of January 1, 1898, however, shall not abrogate any of the rights of either of the parties under said agreement of January 1, 1898.

(f) The purpose of this agreement is to substitute The Delaware Company for the Erie Company in the operation and maintenance of the Jefferson Branch for their mutual convenience, but such substitution shall be only in the respects and particulars and to the extent herein specifically provided, and nothing herein contained shall be construed as causing either party to incur any expense not properly chargeable to it under the said agreement dated January 1, 1898; provided, however, that the expense of the Dispatching Force shall be divided between the parties hereto on the basis of the number of cars handled by each and no distinction shall be made as between empty and loaded cars in the count. In making such count each revenue passenger train shall be reckoned as fifty (50) cars.

(g) Settlements of all sums payable by either party to the other hereunder shall be made monthly. Each party on or before the fifteenth day of each month shall render to the other party bills for such amounts as are payable to it hereunder for the preceding calendar month by such other party and all such bills shall be paid within fifteen (15) days from the date they are rendered. Payment of bills in the manner herein provided shall be made promptly and shall not be delayed or held up because of small items in dispute.

(h) The Delaware Company shall maintain and operate said Jefferson Branch in a manner satisfactory to the Erie Company and in such maintenance and operation shall comply with and conform to the requirements of all valid statutes of the United States or of the State of Pennsylvania now in effect or which may be enacted hereafter and all lawful and enforceable ordinances, orders, regulations or requirements of any State, County, City, Borough, or other authority.

(i) All employees of The Delaware Company, or under its supervision, engaged in the maintenance or operation of said Jefferson Branch shall be acceptable in all respects to the Superintendent of the Erie Company and any such employee who shall not be acceptable to such Superintendent shall be promptly removed at his request.

(j) In case of any disagreement between the parties hereto as to the true construction or meaning of any of the provisions of this agreement, or as to the rights of any party hereunder, or any claim arising hereunder, which the parties fail to adjust between themselves, such matter or matters of disagreement shall be submitted for arbitration to a tribunal to be formed as follows: The tribunal shall consist of three persons, to wit: the General Manager or other officer for the time being in charge of operation of the Erie Company, the General Manager or other officer for the time being in charge of operation of The Delaware Company, the third member to be selected by these two. In case, after ten (10) days' written notice from either party of a desire for arbitration, in which the question or questions to be arbitrated shall be stated, these two officers shall fail to select a third member of the tribunal, the party seeking the arbitration may file in the Court of Common Pleas of the County of Lackawanna or the County of Susquehanna, State of Pennsylvania, a copy of this contract with the names of the aforesaid representatives of the two parties and a statement of the question which it is desired to arbitrate, which papers so filed it is agreed shall become a rule of court. At any time after the filing in court of such submission either party may, upon five days' written notice to the other, apply to such court for the appointment by it of a third arbitrator to act with the two aforesaid representatives. The tribunal so constituted shall give ten (10) days' written notice of the time and

place of hearing the parties, and shall proceed without delay to hear the proofs and allegations of the parties or of such party as may appear before them, and determine the questions and matters submitted to them for arbitration, and make their decision and award in writing to be filed in the case. And in case either party refuses or fails upon said written notice given by such arbitrators, to produce its proofs or present its case before them the arbitrators may determine such questions and matters so submitted to them upon proofs presented by the other party, and such proofs as they may procure.

The decision and award of a majority of the arbitrators when made in writing, signed by them and filed in court, shall be in every case final and conclusive and obligatory upon the parties hereto, subject to any exceptions which may properly and legally be presented to the court, and each party hereto agrees to abide by and comply with such decision and award. And it is further agreed that the determination and award of such arbitration or a *bona fide* effort to obtain it, shall be a condition precedent to any right of action with respect to any matter hereby agreed to be submitted to arbitration, and that no right of action, either at law or in equity, shall exist or be invoked with respect to any such matters until after the submission of same to arbitration, as herein provided: and then only to enforce the decision and award of such arbitration except in case of a *bona fide* attempt to obtain such arbitration, which attempt shall have failed through no fault of the party so resorting to litigation.

(k) The Delaware Company shall not assign, sublet or transfer this agreement or any of the rights or privileges secured to or enjoyed by it thereunder without securing the prior written consent of the Erie Company thereto,

signed by its President, a Vice-President or its General Manager.

(1) The Delaware and Hudson Company hereby constitutes and appoints L. F. Loree to be its attorney, for it, and in its name and as and for its corporate act and deed to acknowledge this agreement before any person having authority by the laws of Pennsylvania to take such acknowledgment, to the intent that the same may be recorded.

The Erie Railroad Company hereby constitutes and appoints David Bosman to be its attorney, for it, and in its name and as and for its corporate act and deed to acknowledge this agreement before any person having authority by the laws of Pennsylvania to take such acknowledgment, to the intent that the same may be recorded.

IN WITNESS WHEREOF, the parties hereto have caused their respective corporate seals to be hereunto affixed, and this instrument to be signed by their respective proper officers as of the day and year first above written.

Attest:	THE DELAWARE AND HUDSON COMPANY,
C. A. Walker,	By L. F. Loree,
Treasurer.	President.

Attest:	ERIE RAILROAD COMPANY,
David Bosman,	By F. D. Underwood,
Secretary.	President.

STATE OF NEW YORK,)
 County of New York,) ss.:

I hereby certify that on this 27th day of December, in the year 1916, before me, the subscriber, a notary public, personally appeared L. F. Loree, the attorney named in the foregoing agreement, and by virtue and in pursuance of the authority therein conferred upon him, acknowledged the said agreement to be the act of the said The Delaware and Hudson Company.

Witness my hand and notarial seal the day and year aforesaid.

CELIA SACHS,
 Notary Public,
 New York County No. 6.

New York Register No. 8062.
 My commission expires Mch. 30, 1918.

STATE OF NEW YORK,)
 County of New York,) ss.:

I hereby certify that on this 8th day of February, in the year 1917, before me, the subscriber, a notary public, personally appeared David Bosman, the attorney named in the foregoing agreement, and by virtue and in pursuance of the authority therein conferred upon him, acknowledged the said agreement to be the act of the said Erie Railroad Company.

Witness my hand and notarial seal the day and year aforesaid.

A. L. TRAVIS,
 Notary Public No. 95,
 Kings County.

Certificate filed in New York County, No. 39.
 My commission expires March 30, 1917.

ERIE RAILROAD COMPANY
MATERIAL AND TOOLS LEFT ON JEFFERSON DIVISION,
NOVEMBER 1, 1909.
TOOLS

Adzes, with handles	62 at	.78 $\frac{3}{4}$	\$48.82
Adzes, without handles	4 at	.69	2.76
Adzes handles (new)	4 at	.13	.52
Axes, Chopping, with handles	1 at	.48 $\frac{3}{4}$	.48
Axes, Hand, with handles	1 at	.48 $\frac{3}{4}$	.48
Bars, Claw	71 at	.63	44.73
Bars, Lining	100 at	.42 $\frac{3}{4}$	42.75
Bars, Tamping	4 at	.42 $\frac{3}{4}$	1.71
Cans, Two Gallon	15 at	.23 $\frac{1}{4}$	3.48
Cans, Five Gallon	6 at	.40 $\frac{1}{2}$	2.43
Cars, Hand	10 at	18.75	187.50
Cars, Push	11 at	16.50	181.50
Chisels, Track	107 at	.36 $\frac{3}{4}$	39.32
Dippers	2 at	.04 $\frac{1}{2}$	.09
Drills, Track (Paulus)	3 at	16.87 $\frac{1}{2}$	50.62
Drills, Track (Sheffield)	2 at	12.37 $\frac{1}{2}$	24.75
Drills, Track (Rachet)	1 at	1.91 $\frac{1}{4}$	1.91
Drill Bits (3 sizes)	45 at	.40 $\frac{1}{2}$	18.22
Forks, Ballast	25 at	.69	17.25
Gauges, Track	22 at	1.16 $\frac{1}{4}$	25.57
Grind Stones, complete	4 at	1.95	7.80
Jacks, Track No. 1	23 at	3.28 $\frac{1}{2}$	75.55
Level Boards	15 at	2.81 $\frac{1}{4}$	42.18
Picks, Common Clay, with handles	33 at	.33 $\frac{7}{8}$	11.17
Picks, Common Clay, without handles	2 at	.26 $\frac{1}{4}$	.52
Picks, Tamping, with handles	150 at	.35 $\frac{5}{8}$	53.43
Picks, Tamping, without handles (new)	15 at	.37	5.55
Picks, Tamping handles	78 at	.10 $\frac{1}{2}$	8.19
Railbenders	1 at	33.75	33.75
Railtongs	59 at	.74 $\frac{1}{4}$	43.80
Saws, Cross Cut	2 at	.93 $\frac{3}{4}$	1.87
Shovels, Track	125 at	.28 $\frac{1}{2}$	35.62

TOOLS (Con.)

Shovels, Scoop	72 at	.30 $\frac{3}{4}$	22.14
Shovels, Scoop (new)	16 at	.41	6.56
Shovels, Snow	2 at	.18 $\frac{3}{4}$	.37
Sledges	7 at	.37 $\frac{1}{2}$	2.62
Striking Hammers	3 at	.24 $\frac{3}{4}$	.74
Spike Mauls, with handles	76 at	.46 $\frac{7}{8}$	35.62
Spike Mauls, without handles	10 at	.39	3.90
Spike Mauls, handles (new)	34 at	.10 $\frac{1}{2}$	3.57
Torches	7 at	.12 $\frac{3}{4}$	.89
Water Pails	2 at	.23 $\frac{1}{4}$	.46
Wheelbarrows	15 at	1.18 $\frac{1}{2}$	17.77
Wrenches, Track	83 at	.35 $\frac{1}{4}$	29.25
Wrenches, Monkey, 12"	6 at	.49 $\frac{1}{2}$	2.97
Brace and Bit	1 at	1.50	1.50
Iron Bench Vise	1 at	3.75	3.75
Surfacing Board	1 at	6.00	6.00
Ice Hooks, 8 feet long	22 at	.75	16.50
Ice Hooks, 12 feet long	8 at	.86 $\frac{1}{4}$	6.90
Ice Hooks, 16 feet long	1 at	1.06 $\frac{1}{2}$	1.06
Ice Hooks, 6 feet long	3 at	.66 $\frac{5}{8}$	1.96
Ice Hooks, 3'6" feet long	52 at	.56 $\frac{1}{4}$	29.25
Ice Hooks, 4 feet long	16 at	.56 $\frac{1}{4}$	9.00
Snow Scrapers	5 at	4.50	22.50
Ice Plows, complete	4 at	21.37 $\frac{1}{2}$	85.50
Ice Saws	3 at	3.56 $\frac{1}{4}$	10.68
Ice Grab Hooks	8 at	1.37 $\frac{1}{8}$	10.97
Ice Needles	8 at	2.43 $\frac{3}{4}$	29.50
Ice Calkers	5 at	1.87 $\frac{1}{2}$	9.37
Ice Tongs (long)	2 at	1.64 $\frac{1}{2}$	3.28
Ice Spuds	1 at	2.25	2.25

MATERIALS

Bolts, Track, $\frac{3}{4}$ "x4 $\frac{1}{4}$ ", new kegs	48 at	3.85	\$184.80
Bolts, Track, $\frac{7}{8}$ "x4 $\frac{1}{4}$ ", new kegs	18 at	4.80	86.40
Bolts, Track, 63/64"x4 $\frac{3}{4}$ ", new kegs	41 at	4.20	172.20
Bolts, Track, $\frac{3}{4}$ "x3 $\frac{7}{8}$ ", new kegs	11 $\frac{1}{2}$ at	4.20	48.30
Spikes, Track, new kegs	91 at	3.30	300.30
Spikes, Crossing, new kegs	2 at	4.60	9.20
Nut Locks, one inch, new kegs	7 at	4.40 per M.	46.20
Nut Locks, one inch, new boxes	2 at	4.40 per M.	8.80
Tie Plugs, bags and boxes	7 at	.50 per M.	3.50
Salt, 200 lb. bags	33 at	.32	17.16

MATERIALS (Con.)

Pine Ties (new) 7x9x8½	3 at	.74½		2.23
Crossing Plank (new), 3x30x12	15 at	.75		11.25
Crossing Plank (new), 3x10x16	49 at	1.00		49.00
Crossing Plank (2nd), 3x12x16	38 at	.90		34.20
Crossing Plank (2nd), 2x10x16	54 at	.49½		27.73
Stakes, Platform (2nd)	33 at	.24		7.92
Hayes Derails (new)	2 at	11.50		23.00
Switch Stands, Star, 2nd hand	1 at	5.94¾		5.94
Switch Stands, Ramapo No. 6, 2nd hand	1 at	10.50		10.50
Switch Stands, Ramapo No. 6, 2nd hand	1 at	7.87½		7.87
Switch Stands, Ramapo No. 20, new	1 at	15.00		15.00
Switch Stands, Ramapo No. 19, new auto	2 at	14.00		28.00
Switch Stands, Ramapo No. 17, 2nd hand	3 at	12.37½		37.12
Splice Bars, 4 hole, continuous 90 lb. (new) pair	50 at	1.43		71.50
Splice Bars, 4 hole, ordinary 90 lb. (2nd hand) pair	90 at	.58		52.20
Splice Bars, 6 hole, ordinary 90 lb. (2nd hand) pair	105 at	.58		60.90
Tie Plates, Goldie intermediate (new)	2600 at	.11		286.00
Rail, 90 lb. (new)	1031 at	28.00	per ton	386.59
Rail, 90 lb. (2nd class)	8604 at	23.50	per ton	2,707.90
Rail, 80 lb. (2nd class)	60 at	23.50	per ton	16.78
Rail, 74 lb. (2nd class)	401 at	23.50	per ton	103.63
Rail, 63 lb. (2nd class)	390 at	23.50	per ton	85.77
Switches, complete 24' 90 lb. (new)	8 at	71.60	each	572.80
Switches, complete 15' 90 lb. (new)	9 at	39.50	each	355.50
Switches, complete 12' 90 lb. (new)	1 at	40.15		40.15
Switches, complete 10' 90 lb. (new)	2 at	26.40		52.80
Switches, complete 15' 80 lb. (new)	1 at	37.65		37.65
Switches, complete 10' 80 lb. (new)	2 at	26.00		52.00
Switches, complete 15' 74 lb. (2nd hand)	1 at	22.31		22.31
Switch Points, Manganese				
15' 90 lb. (new), pair	2 at	60.00		120.00
18' 90 lb. (new), pair	1 at	28.40		28.40
30' 90 lb. (new), pair	5 at	24.00		120.00

MATERIALS (Con.)

Guard Rails, 8' 3", 90 lb. (new)	2 at	10.00	20.00
Guard Rails, 10', 80 lb. (2nd hand)	2 at	3.56¼	7.12
Guard Rails, 8' 3", 74 lb. (2nd hand)	2 at	7.50	15.00
Frogs, Spring Rail, R.H., No. 10, 90 lb. (new)	7 at	57.00	399.00
Frogs, Spring Rail, R.H., No. 10, 90 lb. (rep.)	1 at	25.00	25.00
Frogs, Spring Rail, R.H., No. 10, 74 lb. (2nd hand)	1 at	12.93	12.93
Frogs, Spring Rail, L.H., No. 10, 90 lb. (new)	9 at	57.00	513.00
Frogs, Spring Rail, L.H., No. 10, 74 lb. (2nd hand)	1 at	12.93	12.93
Frogs, Rigid No. 10, 90 lb. (new)	1 at	38.90	38.90
Frogs, Rigid No. 15, 90 lb. (new)	8 at	54.20	433.60
Frogs, Rigid No. 16, 90 lb. (new)	2 at	135.00	270.00
Frogs, Rigid No. 8, 90 lb. (new)	4 at	30.65	122.60
Frogs, Rigid No. 8, 80 lb. (new)	1 at	25.00	25.00
Movable Points, 12 ft., 90 lb. (new)	6 at	30.00	180.00
Cast Iron Pipe (12 ft. lengths of 36" pipe)	6 at	57.50	345.00
Caboose Stoves (2nd hand)	21 at	8.62½	181.12
State Stoves (in supervisor's office)	1 at	7.50	7.50
Bunk Cars (off trucks)	13		
Galvanizers Cars (off trucks) with tools	1		
Car used as supervisor's office	1		
Brass Lamps in supervisor's office	2 at	.75	1.50
Desks in supervisor's office	2 at	3.00	6.00
Table in supervisor's office	1 at	1.00	1.00
Shelf in supervisor's office	1 at	2.00	2.00
Filing cases in supervisor's office	9 at	.35	3.15

MATERIALS FOR NEW WATER STATION AT STARRUCCA

510 ft. of 6" B. & S. C. I. Pipe, approximate weight	15,513 lbs.	\$238.80
96 ft. of 10" B. & S. C. I. Pipe, approximate weight	5,728 lbs.	87.52
12 ft. of 10" B. & S. C. I. Pipe, flange & spigot end	716 lbs.	10.88
24 ft. of 14" B. & S. C. I. Pipe	2,400 lbs.	39.60
24 ft. of 12" Flange Pipe	2,300 lbs.	30.00
1 6" 40" Elbow	140 lbs.	3.50
1 6"x4" B. & S. C. I. Pipe Reducer	84 lbs.	1.60
1 10" B. & S. Elbow	260 lbs.	7.95
1 12" B. & S. Elbow	319 lbs.	11.30
1 6" Y Branch B. & S., weight	207 lbs.	6.50
18 ft. of 4" B. & S. C. I. Pipe	450 lbs.	7.12
2 6" Elbows B. & S. C. I. Pipe, weight	292 lbs.	7.00

MATERIAL FOR OUTSIDE TOILETS

At Brandts, Thompson, Ararat and Forest City.

1 piece 4x 8x16 Hemlock	\$1.06
1 piece 4x 6x16 Hemlock	.80
34 pieces 1x10x16 Hemlock	12.33
2 pieces 2x 4x16 Hemlock	.50
12 pieces 2x10x16 Hemlock	8.00
1 piece 1 $\frac{3}{8}$ x16x8 White Pine	.59
1 roll of Paroid Roofing Paper	6.25
2 pairs of 2x3 Hinges	.12
2 Rimlocks and Knobs	.86
25 lb. 8.D. Wire Nails	.62

Material shipped to Jefferson Division since inventory was taken.

4 kegs of $\frac{1}{2}$ " by 9" Crossing Spikes	at \$4.50 per keg	\$18.40
16 kegs Tie Plugs	at .50 per M.	8.00
1000 $\frac{1}{8}$ " Track Shim Expansion	at 2.00 per M.	2.00

Additional material for new water station at Starrucca.

1 16x24 50,000 gal. Water Tank, complete	\$399.50
1 26' Erie Standard Sub-structure, complete	707.30
Lumber for Roof of Tank	106.15

July 6th, 1917.

Mr. A. E. RUFFER,
Gen. Sup't Transportation, Erie R. R.,
New York, N. Y.

Dear Sir:

Replying to your letter of June 15th, in reference to handling live stock shipments from Brandt or Jefferson Jct., to local points on the Jefferson Division.

The Delaware and Hudson Company will handle carload shipments of live stock reaching Brandt or Jefferson Jct., in its southbound trains, as agent for the Erie R. R., from Brandt or Jefferson Jct. to local points on the Jefferson Division under the following conditions:

The Delaware and Hudson Company to receive 50% of the revenue accruing to the Erie R. R. for the movement of this stock. The Erie R. R. to be responsible for the per diem on the cars and proper delivery of the freight, inasmuch as the Jefferson Division agents are bonded to the Erie R. R. Company; the Erie to dispose of or furnish disposition for the car after it is made empty.

This letter to serve the purpose of an agreement to handle this business. No revision to be made to tariff and no supplement to be made to the contract now in effect.

If this agreement is acceptable to the Erie R. R. will you please write me to that effect.

Yours truly,

J. B. DICKSON,
General Sup't of Transportation.

ERIE RAILROAD COMPANY

Office of the General Sup't of Transportation

File GA-470-B

New York, July 10, 1917.

Mr. J. B. DICKSON,
General Sup't of Transportation,
The Delaware and Hudson Company,
Albany, N. Y.

Dear Sir:

Acknowledging receipt of your letter of July 6th, this is to advise that it is satisfactory to us for you to handle shipments of live stock reaching Brandt or Jefferson Jct., in your southbound trains, your Company to act in the capacity of Agent for the Erie Railroad to local points on the Jefferson Division.

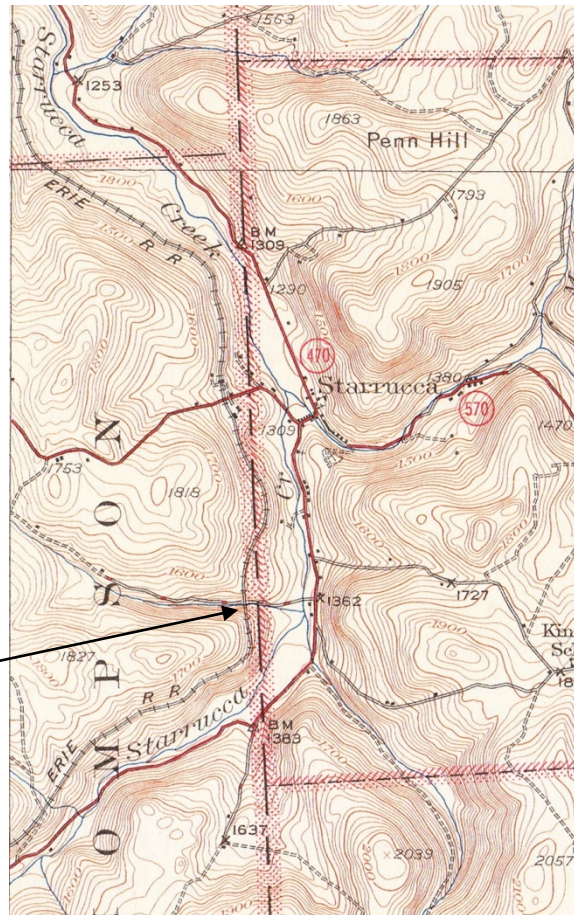
In consideration of this we will allow you 50% of the revenue accruing to this Company for the movement of the stock and will be responsible for the per diem on the cars and proper delivery of freight. We will also arrange disposition of the cars after being made empty.

Yours respectfully,

A. E. RUFFER,
Sup't of Transportation.

9. The Highworks at Starrucca

D&H trestle over Buck's Creek: the trestle was 45 feet high. "This span, now removed, was located along the D&H just north of Thompson in Starrucca. It crossed over a deep ravine where the stream drops in a spectacular fashion at Buck's Falls." Mike Bischak"



The new steam shovel that the D&H acquired in 1882 was used to load culm at the Lackawanna Breaker for shipment to Starrucca where the culm was used as fill around the trestle over Buck's Creek. In the *Carbondale Leader* of January 20, 1882, we read:

"The new steam shovel of the D. & H. C. Co. is being used to ship culm for filling the high trestling on the Jefferson Branch near Starrucca. The culm is obtained from the immense pile near the Lackawanna breaker." (*Carbondale Leader*, January 20, 1882, p. 4)

A fearful accident took place on the Jefferson Branch on the high trestling East of the Thompson station in May 1879.

Here is what happened: Conductor Palmer left Susquehanna for Carbondale at 9 P. M. with a train of upwards of 120 empty coal cars, with an engine at both ends, being what was called 'a double header.' They proceeded without accident until they arrived near Thompson station. There the engine acting as pusher seemed to crowd upon the train, and the third car in front of the caboose is supposed to have then mounted the rail. But it kept the track, until they arrived at the high trestling East of Thompson station, when it broke loose from the train, and fell from the trestling, taking with it also two other coal cars, and the caboose, in which were Conductor Palmer and flagman Stewart, and fireman Murphy. The distance to the ground is there from forty to forty-five feet. The caboose turned over, and containing fire, and lamps, was immediately

wrapped in flames. Michael Murphy of Lanesboro died as a result of accident; S. T. Palmer, and George M. Stewart were seriously injured, but not fatally. Here is the accident report that was published in the *Carbondale Advance* of May 17, 1879:

“Fearful Accident on the Branch. / A shocking accident occurred on the Jefferson Branch, about twenty miles North of this city, on last Friday night, at about half past eleven o’clock, resulting in the death of Michael Murphy, of Lanesboro, and very serious injuries to Conductor S. T. Palmer, and George M. Stewart. / Conductor Palmer left Susquehanna for Carbondale at 9 P. M. with a train of upwards of 120 empty coal cars, with an engine at both ends, being what is called ‘a double header.’ They proceeded without accident until they arrived near Thompson station. There the engine acting as pusher seemed to crowd upon the train, and the third car in front of the caboose is supposed to have then mounted the rail. But it kept the track, until they arrived at the high trestling East of Thompson station, when it broke loose from the train, and fell from the trestling, taking with also two other coal cars, and the caboose, in which were Conductor Palmer and flagman Stewart, and fireman Murphy. The distance to the ground is there from forty to forty-five feet. The caboose turned over, and containing fire, and lamps, was immediately wrapped in flames. A fiery death seemed inevitable, but they all escaped alive, from the terrible danger. / Murphy was taken back to his home in Lanesboro, and Messrs. Palmer and Stewart brought to their homes in this city. / Mr. Palmer’s injuries are very severe burns on his left arm and hand, chest, shoulders, and face, with bruises and a general shock of the system occasioned by the fall of forty-five feet. / Mr. Stewart had the left hip dislocated, and the cap of the joint fractured, his right arm broken, but much less severely than Mr. Palmer. / Both are made as comfortable as possible after the severe injuries they have received, and we are glad to state that there is a good prospect of their recovery.” (*Carbondale Advance*, May 17, 1879, p.3)

Given below is the only known photograph of this trestle east of Thompson on the Jefferson Branch.

Photo by Mike Bischak of trestle east of Thompson on the Jefferson Branch. Photo taken July 4, 1984.



Additions for Volume XII

1. Altamont, NY D&H Passenger Station becomes Altamont NY Free Library

In Doug Barron's column ("The Receiving Yard") in the September 2016 issue of the *Bridge Line Historical Society Bulletin*, p. 44, is the following article from the *Albany Times Union* about the transformation of the Altamont D&H Railroad Station into the Altamont Free Library:

Altamont Free Library celebrates 100 years

... The Altamont NY Free Library is known to many villagers as the little train station that could. The library was chartered a century ago, and moved around the village for a good chunk of those hundred years. In 2012, after years of renovation, the library finally pulled into the former 1897 Delaware & Hudson Railroad passenger train station. The last passenger train pulled out of the station, which is listed on the National Register of Historic Places, was in 1963. Over the years, the station had been utilized by a number of businesses and organizations, until the library bought the depot in 2005 for \$250,000 as part of a \$300,000 Guilderland town bond issue. It took seven years to restore the building to its original grandeur. The historic building's original architectural details include crown molding, a stained glass eyebrow window, cupola, open canopy platform, and a towering 26-foot high ceiling. The library has been holding events throughout the year to celebrate its 100-year anniversary. Albany **Times Union**

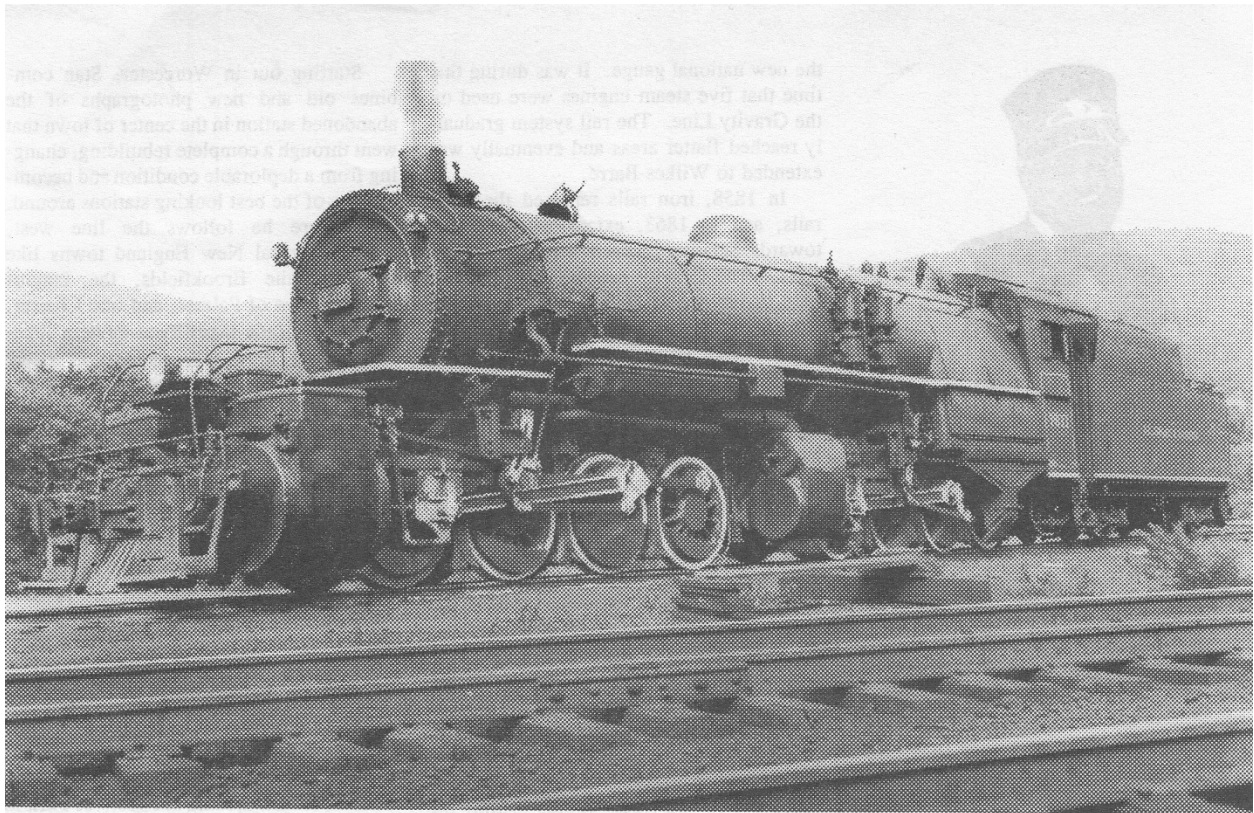
2. Section of Albany Rail Trail blocked in Slingerlands

Also in Doug Barron's column ("The Receiving Yard") in the September 2016 issue of the *Bridge Line Historical Society Bulletin* (pp. 44, 49) is the following article from the Albany *Times Union* about the difficulties encountered in establishing the Albany Rail Trail between Slingerlands and Voorheesville:

Albany County Rail Trail ... A section of the trail in Slingerlands had been blocked by homeowner Brian Dootz, whose driveway crosses the trail. He had posted "No Trespassing" signs and blocked off the trail with a fence in a dispute with the county about his rights on the property. Dootz owns the former D&H freight house that is next to the trail. The county took down the fence and signs, and had gravel laid so that walkers and bikers can pass. The county took "ownership" of the former Delaware & Hudson rail corridor in 2009. The county says it owns the land under Dootz' old railroad freight house and Dootz has not paid any money on the lease. The county told Dootz he must remove his belongings from the freight house and take down an expansion to his house that the county said encroaches on the rail trail right-of-way by July 31. The county said Dootz must pay back rent on the freight house and pay a "reasonable" fee for the use of the land for the addition, which appears to be a mud room. If Dootz does not comply, the county will take possession of the freight house and remove the mud room. The 9.6-mile trail is paved from Albany to Slingerlands, but the section from Dootz' property to Voorheesville remains unpaved. County officials hope to have it paved in 2017. Albany **Times Union**

3. D&H Mallet No. 1612 on the Cascade wye:

On page 9 of the September 2016 issue of the *Bridge Line Historical Society Bulletin* there is a photo from the Jack MacDonald collection of D&H Mallet No. 1612 on the Cascade Wye. This may well be the only photograph in existence of an engine on the Cascade wye. Here is that photograph, together with the caption on the photo in the *BLHS Bulletin*:



“D&H 0-8-8-0 Mallet #1612 on the Cascade Wye at Lanesboro, Pa. on July 30, 1948. Photo from Jos. R. Quinn; BLHS Archives, Jack MacDonald collection. The photographer (likely Joe Quinn) took this photo at the base of one of the wye’s legs, which was wise, as we have been informed by **Howard Hontz** that the tail track area was notorious for rattlesnakes.”

4. Westinghouse Air Brake

George Westinghouse, who invented and developed the air brake, was born at Central Bridge on October 6, 1846. He was granted a patent on his invention on April 13, 1869. By 1875, the passenger trains of nearly all the principal roads in America were fully equipped with the Westinghouse air brake. His development of the quick-acting brake in 1886, which acted

instantaneously on each car upon its application, and upon each part of a train in case of accidental parting, led to its universal application to freight equipment.

Here is an advertisement from the Westinghouse Air Brake Company that is given on the inside front cover of the November 1893 issue (Volume XVII, No. 11) of the *Locomotive Firemen's Magazine*:

GEO. WESTINGHOUSE, Jr., President.
T. W. WELSH, Superintendent.

JOHN CALDWELL, Treasurer.
H. H. WESTINGHOUSE, General Manager.

W. W. CARD, Secretary

— THE —
Westinghouse Air Brake Company,

PITTSBURGH, PA., U. S. A.

MANUFACTURERS OF THE

WESTINGHOUSE AUTOMATIC BRAKE.

The WESTINGHOUSE AUTOMATIC BRAKE is now in use on 24,000 Engines and 325,000 Cars. This includes (with plain brakes) 232,000 Freight Cars, which is about 23 per cent. of the entire freight car equipment of this country, and about 80 per cent. of these are engaged in interstate traffic, affording the opportunity of controlling the speed of trains by their use on Railways over which they may pass. Orders have been received for 173,000 of the Improved Quick Action Brakes since December, 1887.

The best results are obtained in freight train braking from having all the cars in a train fitted with power brakes, but several years' experience has proven conclusively that brakes can be successfully and profitably used on freight trains where but a portion of the cars are so equipped.

E. L. ANDREON, Manager.

JOHN B. GRAY, Agent.

C. C. HIGHAM, Gen'l Supt.

THE AMERICAN BRAKE COMPANY,

NEW YORK OFFICE—160 Broadway, John B. Gray, Agt

CHICAGO OFFICE—Grand Pacific Hotel.

THE WESTINGHOUSE AIR BRAKE CO., Lessee.

MANUFACTURERS OF

Locomotive ∴ Brake

GENERAL OFFICES: ST. LOUIS, MO., U. S. A.

Additions for Volume XIV:

1. D&H Police Pistol & Rifle Club trophy, 1923

On October 5, 2016, the 1923 Pennsylvania Division Police Pistol & Rifle Club trophy that is shown below was offered for sale on E-Bay for \$1000. Our thanks to John V. Buberniak for bringing this item to our attention.

The inscription on the trophy at right reads as follows:

The D&H
Police
Pistol & Rifle Club
Penna Division
Champions
1923
Heath
White
Thomas
Parkin



2. *BLHS Bulletin*, November 2016, p. 17: "The last Rail Track train out of Carbondale yard. D&H C420 #413 (Altschul blue) & RS3m #505 waiting for clearance south out of the yard at Dundaff Street (DF Cabin), on March 4, 1979. Mike Bischak photo."



3. The D&H Yard after the tracks were taken up. Two views: one straight on, one from Simpson. Photos by Ros-Al Studios, 56 North Main Street, Carbondale, PA 18407. These aerial photos were made available to the Carbondale Historical Society by Nellie Connolly, Carbondale.



North end of the
Carbondale D&H Yard



4. The William F. Ogden papers on the Pennsylvania Division of the D&H. Notebook of data about the Pennsylvania Division that were collected and preserved by William F. Ogden, Carbondale. These papers cover the period 1953-1970. Our sincere thanks to Robert Penzone, son-in-law of William F. Ogden, who donated these papers to the Carbondale Historical Society on April 26, 2007.



In loving Memory of
William F. Ogden

April 5, 2007



William F. Ogden, 87, a resident of the Forest City Nursing Home, died Thursday after an illness. His wife of 64 years is the former Dorothy E. Corey.

Born Feb. 29, 1920, in Carbondale, son of the late Clarence and Mary Krantz Ogden, he resided in Carbondale his entire life. He was educated in Carbondale schools and was a graduate of Benjamin Franklin High School. An Army veteran of World War II, he served in the Philippines and New Guinea as a radio technician. He was employed by the D & H Railroad as a conductor for 38 years and retired in 1980. He was an active member of the First Presbyterian Church, Carbondale. He served as a member of the trustee board and also in the Couples Club. He was a member of Lodge 249 Free and Accepted Masons and was a member of the United Transportation Union.

He was a tough old guy, who, in spite of disappointments and illnesses in his life, just kept plugging away; the real survivor. He was the one everyone went to when they had a problem and needed advice. He had an amazing memory of people, places and events in his life and loved to tell long stories about them in detail to anyone who would listen. He also loved fishing in Canada and hunting on Elk Mountain and will be greatly missed by all of his family.

The family would like to thank Dr. Neal Davis and the staff of the Forest City Nursing Home for their kind and compassionate care.

Also surviving are a son, William F. Ogden Jr. and wife, Elyse, Dunmore; two daughters, Gloria Shepherd and husband, Jack, Sharon, S.C.; Sandra Penzone and husband, Robert, Carbondale; nine grandchildren; two great-grandchildren; nieces and nephews.

He was also preceded in death by two infant daughters, Linda and Marlyn; and two sisters, Marie Ogden and Emilie Van Den Houten.

The funeral will be Saturday at 4 p.m. in the Oliver R. Shifler Funeral Home Inc., 94 N. Main St., Carbondale, with services by the Rev. Jay Best. Interment will be in, Clinton Center Cemetery.

1953

THE DELAWARE AND HUDSON RAILROAD
CORPORATION

Pennsylvania Division

Office of Superintendent

Carbondale, Pa., May 1, 1953.

AGENTS, TELEGRAPHERS AND TOWERMENS ROSTER:

BIRTH DATE		ENTERED SERVICE	BIRTH		ENTERED SERVICE
6-23-88	A-	1 McNulty, J.J. 9-19-02	8-11-84	31 Kernan, M.J.	1-16-42
9-22-86		2 Lynch, J.H. 9-21-06	12-12-99	32 Taylor, W.E.	2-10-42
10-18-88		3 Frost, C.L. 11-22-07	3-17-24	33 Mullen, J.J.	7-7-42
11-25-89		4 Williams, D.W. 1-3-08	9-24-92	34 Gower, G.A.	8-11-42
3-16-91	A-	5 Pizer, G.E. 7-19-08	2-18-93	35 Brown, N.R.	9-1-42
11-6-90		6 Fink, H.H. 7-9-09	10-16-12	36 Robson, A.L.	4-27-43
6-14-83	A-	7 Michaels, E.M. 7-10-09	7-21-97	37 Sheehan, B.V.	2-5-45
5-26-90		8 Bilbow, M.E. 4-19-10	10-10-21	38 Pearce, E.J.	6-21-45
5-26-90	A-	9 Romich, O.B. 4-19-10	11-6-27	39 McDermott, P.F.	1-29-46
3-13-94	A-	10 Powell, J.B. 1-13-11	3-13-13	40 Treat, M.G.	3-1-46
4-3-2-96		11 Morris, A.R. 1-7-14	1-24-24	41 Delfino, M.J.	3-4-46
9-10-95	-D	12 Sheridan, T.J. 3-2-14	10-25-04	42 Bagdonas, A.P.	6-28-46
3-22-95		13 Judge, J.P. 5-14-14	9-10-10	43 Langan, T.F.	6-30-46
8-8-97	A-	14 Gerhardt, R.C. 7-26-12	3-2-22	44 Sheridan, P.M.	9-19-46
8-3-98		15 Shea, J.P. 7-16-13	10-16-23	45 Brooks, T.T.	6-11-47
6-24-92	A-	16 Loftus, J.A. 6-18-11	10-24-23	46 McCann, J.W.	7-3-48
6-11-91		17 Fry, G.W. 5-17-15	1-4-31	47 Burke, E.F.	7-4-48
5-9-94		18 Hopkins, T.A. 12-1-15	10-2-29	48 Burke, T.C.	8-3-49
6-4-97		19 Snyder, Harold 11-28-16	9-8-27	49 Costa, O.C.	9-9-49
5-31-98	A-	20 Roberts, F.R. 7-1-14	11-6-22	50 Skuban, J.J.	1-17-50
11-17-00	A-	21 Langan, T.J. 9-14-17	5-23-52	51 Lepore, P.M.	2-13-50
2-17-01	A-D	22 Devaney, P.J. 12-27-17	11-7-29	52 Brown, Geo. R.	12-18-50
6-18-96	A-	23 Coons, H.S. 3-1-16		53 Hatala, J.R.	2-3-53
8-6-00	A-	24 Brown, George 6-28-18		54 Henahan, E.L.	2-5-53
9-22-98	A	25 Smith, C.S. 6-18-17		55 Costa, J.V.	3-14-53
12-11-01	A-D	26 Thomas, G.R. 9-10-18			
1-4-87	A-	27 Johns, W.A. 11-17-04			
9-4-96	A-	28 Howarth, Noble 3-14-19			
2-13-03	A-	29 Coons, E.V. 10-10-21			
10-14-06		30 Gerrity, M.G. 5-2-26			

"A" Denotes (Qualified Agent)

"D" Denotes (Qualified Train Dispatcher)

1955

**AVERAGE AGE OF WORK FORCE IN TRAIN SERVICE
ON PENNSYLVANIA SUBDIVISION**

LIST OF CONDUCTORS

LIST OF YARDMASTERS

LIST OF TRAINMEN

LIST OF ENGINEMEN

LIST OF FIREMEN

LIST OF SWITCHTENDERS

LIST OF AGENTS AND TELEGRAPHERS

Year of Birth	Engineers	Firemen	Conductors	Trainmen	Switchtenders	Yardmasters	Total
1878	1						1
1880			2	1			3
1881				1			1
1882	5			5			10
1883	3			2			5
1884	4		1	4			9
1885	2		5	1			9
1886		1	3	4	1		9
1887	4			2			6
1888	8	3		3		1	15
1889	6		3	4			13
1890	6	3	1	7			17
1891	3	1	3	6	2		15
1892	4	5	1	5		1	16
1893	7	2	1	8		1	19
1894	4	7	7	5			23
1895	1	1		13		1	16
1896	4	3		11		3	21
1897	2	4		10	1	3	20
1898		6		14		2	22
1899		3		10	2		15
1900				6		1	7
1901		3		9		2	14
1902				2		1	3
1903		4		7	2		13
1904		2		10	1	2	15
1905							
1906				1	2		3
1907		1		1	1	1	4
1908				4			4
1909				7		1	8
1910				7	1	1	9
1911		2		7			9
1912		6		9			15
1913		5		7			12
1914		6		9	2	1	18
1915		6		4		1	11
1916		4		5	1		10
1917		5		2	1		8
1918		5		8		1	14
1919		2		6			8
1920		3		12	1		16
1921		1		9			10
1922		1		10		2	13
1923		1		1	1		3
1924		1		8			9
1925		1		9	1		11
1926		1		7			8
1927		5		5			10
1928		1		3			4
1929		2		1			3
1930		1		1			2
1931		1		2	1		4

Handwritten notes:
 1895-1905: *ave age 65.5*
 1911-1921: *ave age 46.8*
 1922-1931: *ave age 46.6*
 1922-1931: *ave age 47.3*
 1922-1931: *ave age 51.2*

THE DELAWARE AND HUDSON RAILROAD

CORPORATION
PENNSYLVANIA DIVISION

CONDUCTORS

NAME	DATE ENTERED SERVICE	DATE OF BIRTH	
ALEXANDER, EARL	8-30-1911	8-5-1889	13
BAUER, CHARLES J.	7-29-1905	1-11-1886	90
DAUGHERTY, C.	7-31-1912	2-14-1893	24
DINER, F. A.	8-21-1910	9-23-1889	27
DUFFY, L. J.	11-14-1913	8-25-1895	19
FAY, T. A.	7-25-1914	12-18-1892	26
FREAR, CARL	7-25-1914	4-6-1895	16
FRENCH, PETER E.	1-10-1905	5-12-1880	6
GEESSEY, N.	5-18-1910	4-15-1891	18
GIMMARTIN, B. A.	4-22-1907	4-28-1885	7
HECK, J. N.	4-15-1911	12-5-1891	4
HUMPHREY, D.	8-17-1911	10-12-1880	23
JONES, D. T.	12-2-1904	7-12-1884	8
KEATING, P. J.	10-27-1911	6-30-1889	10
KILGANNON, J. C.	8-14-1910	1-11-1885	25
LAWLOR, J. J.	7-4-1912	7-21-1894	5
LITTLE, GEO. T.	11-8-1908	8-6-1885	21
LOFTUS, H. J.	5-18-1914	8-26-1894	15
McLAUGHLIN, JOHN P.	4-7-1907	9-25-1886	17
McMAHON, T. E.	8-31-1912	12-6-1894	11
ROGERS, E. H.	5-2-1904	3-14-1885	7
RUDDICK, W. J.	1-4-1913	3-13-1894	22
SHISBY, J. L.	7-28-1914	7-5-1890	17
SIMRELL, FRANK G.	10-7-1911	5-22-1891	11
SNEB, M. J.	8-6-1910	11-30-1886	7
THACHER, W. P.	10-1-1903	7-26-1885	22
WALSH, GEORGE T.	8-19-1912	6-22-1894	

6-1-55

YARDMASTERS

<u>NAME</u>	<u>DATE OF BIRTH</u>	<u>DATE ENTERED SERVICE</u>
BIRTEL, L. J.	5-18-1892	7- 9-1919
BRADY, J. J.	8-26-1909	7- 1-1927
BROWN, M. A.	8-21-1896	11- 1-1917 -
CADDEN, J. F.	6-27-1907	3-18-1926
COOKE, W. J.	3-17-1897	3- 1-1924
COKE, W. J., JR.	6- 4-1918	4- 4-1942
DOWLING, D. L.	6-27-1895	1-25-1916 -
DOWLING, J. J.	3-14-1898	4-16-1917 -
FARR, C. R.	12- 6-1915	12-21-1941
FERRELL, M. M.	5-28-1901	1- 3-1918 -
FOLEY, E. J.	6-10-1888	1- 1-1913
GALLAGHER, J. J.	6-12-1896	6-18-1914
HANNON, J. J.	9-11-1898	12-22-1919
HECK, J. N., JR.	5-26-1922	1- 6-1942
HOYLE, A. R.	4- 9-1904	5-27-1918 -
KANE, W. A.	3-15-1897	2-22-1919 -
KELLY, W. A.	4-10-1893	9- 8-1913
KNICKERBOCKER, G. B.	10- 8-1897	9-10-1919 =
MANNION, J. F.	10-15-1901	5-16-1918
MISKELL, J. J.	3-12-1910	9-17-1929
MITCHELL, F. N.	12-13-1902	5-28-1918
O'DONNELL, E. A.	3-22-1914	3-25-1942
REYNAR, W. H.	7-12-1897	1- 1-1917 -
RHODES, R. N.	8-24-1900	12- 1-1916 -
WALKER, J.	12-30-1922	6-16-1942
WHEELER, M.	4- 7-1904	11- 5-1923

TRAINMEN

NAME	DATE OF BIRTH	DATE ENTERED SERVICE
Addley, R.	2-14-1913	9-18-1941
Amos, C.	9-28-1914	4- 4-1942
Anderson, G. P.	12-28-1891	2- 2-1916 - x
Andrews, W. P.	5-28-1912	5- 2-1942
Aull, F. S.	9-26-1888	8-23-1917 - x
Baldwin, H.	2-20-1911	9-19-1941
Ball, I. W., Jr.	10-23-1926	8-13-1948
Barrett, J. F.	7-11-1894	1-14-1916 - x
Barrett, J. P.	7-19-1920	4-21-1942
Barrett, R. J.	4-28-1918	4- 1-1942
Battle, E. S.	12-26-1911	4-21-1942
Battle, T. J.	4-14-1926	3-22-1950
Becker, J. G.	2- 6-1904	10-16-1926
Beebe, B.	2-13-1910	9-19-1941
Belardinelli, A. J.	8-25-1913	4-22-1942
Besecker, L.	8-15-1889	7-10-1918 - x
Beyer, M. A.	3-21-1903	11-11-1926
Boyle, J. J.	11-21-1898	4- 8-1917 - x
Brady, D. G.	11-23-1925	2-25-1948
Brennan, F. B.	4-28-1900	2-18-1921 - x
Brown, J. F.	8- 3-1911	4-13-1942 - x
Brown, S.	11- 2-1896	2- 6-1916 - x
Brownell, D.	6-10-1901	4-27-1918 - x
Burke, T. J.	12-14-1927	3-22-1950
Burke, T. L.	6-20-1915	3- 3-1942
Burns, D. J.	12- 4-1910	2-20-1942
Burns, F. P.	8-23-1899	2-21-1923
Bynon, B. A.	6-26-1921	3- 8-1942
Callahan, A. P.	12-12-1892	12-10-1915 - x
Carden, J. A.	8- 4-1922	3-23-1950
Carden, J. L.	8- 4-1899	10- 1-1917 - x
Carden, T. R.	7-13-1901	8-20-1918 - x
Carey, W. A.	4-17-1903	4-22-1942
Casey, S. A.	6- 2-1895	10-23-1920 - x
Casper, G. A.	4-20-1924	8-12-1948
Christ, G. F.	11-16-1903	1- 9-1944
Christian, V.	7-20-1882	10-19-1905 - x
Clarke, J. A.	6-18-1895	12- 6-1915 - x
Clarke, J. A., Jr.	1- 6-1922	6-21-1941
Clarke, J. W.	3- 5-1917	6-14-1941
Clune, J. E.	9-13-1913	9- 1-1941
Clune, P. P.	8-17-1898	8- 5-1917 - x
Cody, W. L.	10-19-1885	2-21-1918 - x
Collins, J. P.	7-16-1894	9-13-1914 - x
Collins, W. F.	8-27-1915	6-14-1941
Colvin, F.	12-21-1895	2- 6-1916 - x
Comisky, C. J.	4-12-1897	11- 3-1917 - x
Conaughton, F. R.	1-23-1884	5- 6-1905 - x
Connor, M. J.	1 -9-1896	1-23-1916 - x
Corbett, L. A.	10-14-1893	4-15-1917 - x

TRAINMEN

SHEET NO. 2

NAME	DATE OF BIRTH	DATE ENTERED SERVICE
Cerecran, R. J.	11-26-1914	8-27-1941
Cerecran, W. H.	8-22-1910	2- 5-1944
Cone, E. R.	1-26-1924	2-25-1948
Cone, J. J.	3- 7-1929	3-23-1950
Grandall, L. H.	9- 4-1886	1-17-1911 - +
Cummings, J. F.	5-10-1897	2-22-1918 - x
Daugherty, F. E.	12-19-1904	11- 6-1926
Davies, E. D.	8- 8-1921	8-10-1948
Davis, R. B.	8-16-1887	12-31-1906 - +
Dee, W. D.	10-14-1899	3- 6-1926
Devaney, E. F.	11-17-1896	12-25-1919 - x
Devaney, T. E.	7-16-1925	8-10-1948
Dirner, J. T.	5-14-1919	6-20-1941
Dunchoosky, A. J.	7- 9-1921	3-20-1942
Dougher, J. J.	1-13-1894	2- 8-1916 - x
Duffy, L. J., Jr.	5-31-1927	3-23-1950
Egan, T.	1-31-1921	10-17-1941
Emmert, J. J.	3-11-1911	3-19-1942
Emmons, J. H.		9-19-1941
Evans, T.	3-18-1893	5-14-1920 - x
Evans, W.	11- 6-1912	3-23-1942
Fagan, J. A.	11-14-1922	7-23-1941
Feldman, J. J.	2-12-1895	10- 8-1914 - +
Fine, M. M.	2-12-1916	10-12-1941
Fisher, J. V.	12-28-1920	2-25-1948
Fletcher, A. E.	7-22-1926	2-27-1948
Flynn, T. M.	12- 4-1920	9-22-1941 - x
Fotts, F. P.	9-15-1892	12-29-1917
Fortune, J. R.	4-29-1916	10-14-1941
Frail, J. C.	8-10-1912	4- 5-1942
Frear, C. R.	4- 6-1895	7-25-1914 - +
Gallagher, G. K.	2-13-1898	10- 1-1917 - x
Gallagher, J. J.	1-23-1914	7-23-1941
Gavin, J. G.	7-29-1924	2-29-1948
Garrity, J. P.	7- 3-1901	5-12-1920 - +
Gibbons, J. J.	8-16-1927	8-10-1948
Gibson, W. J.	1-21-1921	9-18-1941
Gill, R. J.	7- 2-1910 60	6-17-1941
Gill, W. F.	10-22-1916	3-20-1942
Grier, T. E.	2- 4-1903	10-26-1926
Gritman, F. A.	6-21-1909	10-15-1941
Grosvenor, C. B.	9-21-1883	1-4-1906 - x
Hadvance, M.	8- 8-1904	11-25-1928
Hall, J. A.	7-25-1918	5- 2-1942
Hanagan, W. B.	9-23-1930	3-29-1950
Hankey, R. R.	5-17-1914	4- 1-1945
Hanlen, J. A.	9-16-1916	3-14-1942
Harris, F.	12- 5-1890	9- 1-1911 - +
Healey, C. R.	7-13-1912	4-27-1942
Healey, M.	7-11-1890	12- 5-1915 - x
Heenan, J.	10-23-1901	10-15-1926

T. J. Gallagher 12-31-55

TRAINMEN

SHEET NO. 3

<u>NAME</u>	<u>DATE OF BIRTH</u>	<u>DATE ENTERED SERVICE</u>
Keenan, R. A.	1-21-1912	6-16-1941
Herron, B. G.	11-12-1909	2-27-1948
Herron, V. P.	3-23-1904	11-12-1926
Hops, J. J.	12-26-1888	2- 2-1912 - x
Hosie, H. A.	7-14-1895	8-12-1914
Hubert, A. L.	9-14-1897	8-19-1920 - x
Hubert, C. R.	5-16-1892	6-25-1917 -
Hunt, A.	10-19-1916	6-17-1941
Hunt, L. R.	5-15-1896	1-23-1918 - x
Ida, E. C.	7-28-1921	4- 7-1942
Jacobson, W. A.	7- 3-1918	3-16-1942
Jakes, A. J.	10- 8-1899	1-13-1918 -
Jones, J. C.	6-29-1899	2-12-1944
Jones, T. P.	12-31-1896	2- -1918 - x
Jones, W.	9-24-1884 -	2-13-1912 -
Jordan, E. S.	5-29-1927	2-25-1948
Jordan, H.	2- 7-1907 ¹³	6-18-1941
Juzielok, G. S.	10-23-1918	3-20-1942
Karnes, J. C.	1-15-1895	8- -1917 -
Kase, R. F.	11-10-1891	3- 5-1916 - x
Keeney, J. H.	8-26-1893	12-13-1917 - x
Kelly, B. F.	8- 9-1899	5- 8-1920 - x
Kenworthy, E. R.	8- 6-1889	11-10-1915
Kimsey, F. A.	2-13-1906	12- 9-1928
Kohut, M.	10- 1-1920	2-27-1946
Kranick, J. G.	6-14-1898	5-15-1916 -
Kredler, J.	10-12-1911	2-17-1942
Lake, F.	1-29-1901	2-11-1923
Lane, R. J.	9- 9-1904 ⁵	2-27-1926
Lane, R. S.	12-14-1890	6-26-1912 - ?
Langen, M.	4-30-1897	11-17-1919 -
Latourrette, C.	3-16-1880 -	1- 9-1909 -
Lawler, P. J.	6-23-1904	11-10-1926
Lawlor, T. F.	3-31-1886	3-10-1906 -
Lee, G. T.	9-25-1901	11-17-1919 - x
Lee, T.	3-20-1893	12- -1915 -
Leotti, J. A.	1-28-1931	3-21-1950
LeStrange, T. V.	3- 3-1920	2-25-1948
Lever, W. R.	9-18-1886	8-18-1911 -
Lewis, E. J.	7-26-1882 -	4-26-1911 -
Lewis, E. W.	6- 6-1895	1-31-1916 -
Lewis, H. J.	11-18-1891	9-18-1917 -
Lewis, J. T.	7-24-1920	3-20-1942
Lingertot, E. R.	4-19-1918	9- 1-1941
Liparula, J. F.	11- 2-1913	3-16-1942
Loftus, D. J.	6- 9-1898	7-31-1918 - x
Loftus, J. A. (Jack)	7-23-1896	6-30-1917 - x
Loftus, John A.	1- 2-1882 - ⁷⁴	12-11-1906 -
Loftus, John J.	7-27-1928	3-21-1950
Mancuso, F. J.	6- 2-1922	2-22-1942
Mangan, M. P.	3-20-1886	8- 3-1918 -

TRADESMEN

SHEET NO. 4

NAME	DATE OF BIRTH	DATE ENTERED SERVICE
Mason, F. B.	2- 3-1908	9-15-1941
Mattarcho, J.	3- 6-1900	2-18-1923
Moffitt, E. F.	8-19-1925	3-22-1950
Monroe, J. W.	4-17-1920	10-15-1941
Moody, J. J.	4-30-1892	12- 4-1915 -
Morgan, J. J.	6-19-1897	1- 6-1918 - x
Moran, P. T.	6-24-1914	4-10-1942
Moran, W. B.	5- 5-1921	3-22-1950
Mosley, T. J., Jr.	11-25-1924	8-12-1948
Mulrooney, J. P.	3-27-1912	4-27-1942
Murphy, A. R.	3-28-1909	9-24-1941
Murphy, J. A.	1-11-1896	11- 1-1917 - x
Murphy, M. B.	2-27-1895	1-21-1916 - x
Murray, P. J.	10-21-1910	9-20-1941
Nassari, C. H.	3-30-1909	3- 2-1942
McAndrew, J. J.	1- 4-1919	4-14-1942
McCaun, J. P.	3-17-1899	9- 1-1918 - x
McCaun, M. W.	1- 6-1884	12-23-1904 -
McCaun, T. A.	2- 6-1898	9-25-1917 - x
McDermott, W. E.	1- 5-1914	10-15-1941
McDonald, L. P.	6-28-1922	9-22-1941
McDonald, P. A.	9- 8-1895	6-21-1917 - x
McDonnell, J. F.	5-24-1897	8-10-1920 -
McDonnell, T. P.	2- 3-1893	3-31-1917 - x
McDonnell, T. W.	5-18-1920	6-15-1941
McDonough, A. J.	2-16-1901	7-20-1923
McDonough, J. J.	12- 3-1898	10-26-1926
McHale, C. R.	11-29-1897	2-12-1941
McHale, E. F.	1-28-1888	4-29-1917 - x
McHugh, J. M.	5-17-1913	4- 2-1942
McKee, F. E.	2-16-1924	2-27-1948
McLaughlin, J. L.	11-11-1909	6-14-1941
McMulty, D. M.	2-20-1925	2-21-1948
McMulty, J. J.	3-23-1893	3- 4-1916 - x
McMulty, W. G.	12-27-1925	3-27-1950
Nealer, R. T.	1- 1-1918	3- 7-1942
Neatts, G. H.	5-11-1890	7-21-1920 - x
Nevin, E.	11- 5-1899	11-23-1919 - x
Nolan, W. F.	1-20-1882	8-25-1913 -
Norris, J. G.	10- 1-1898	4-24-1920 - x
Norton, J. J.	4- 6-1927	2-25-1948
Oakley, A. G.	4-27-1925	4- 1-1945
Ogden, W. F.	2-16-1920	3-16-1942
O'Hara, J. J.	12-17-1889	8- 2-1914 -
O'Hara, V. D.	10- 9-1896	8-21-1917 - x
O'Keefe, M.	4-23-1894	10-10-1914 -
O'Neill, H. W.	3-21-1914	3-15-1942
Osborne, D. V.	1-22-1924	8-10-1948
Osnick, G. M.	4-24-1903	12-12-1926
Owens, R. W.	4-17-1884	10-18-1911 -
Peddick, G. M.	7- 5-1917	3-13-1942

1911

2-29-1920

18
27

1926
1898
28

TRADESMEN

SHEET NO. 5

<u>NAME</u>	<u>DATE OF BIRTH</u>	<u>DATE ENTERED SERVICE</u>
Paddock, S. A.	8-14-1928	3-28-1950
Perry, W. W.	1-10-1913	3-26-1945
Pauly, J. J.	1-27-1903	11-29-1926
Payne, R. M.	9-17-1913	3- 6-1942
Perry, F. J.	8- 4-1910	3-22-1950
Petrylak, S. M.	12-23-1895	2- 7-1920 - x
Pfeiffer, F. W.	8- 2-1890	3- 6-1916 - x
Pissett, C. F.	4-16-1914	10-13-1941
Proeller, G. E.	5- 2-1912	4- 3-1942
Proeller, W. H.	7- 2-1926	2-26-1948
Proferes, G. J.	6-28-1915	3-13-1942
Purcell, P. A.	3-11-1923	8-10-1948
Randall, D. C.	3-23-1896	9- 1-1917 - x
Rau, C. O.	12- 3-1912	8-26-1941
Redily, J. F.	11-29-1910	3-13-1942
Reynolds, R. L.	12-10-1900	7-23-1918 - x
Richards, G. E.	12-31-1891	11-15-1913 - x
Richards, L. T.	8-18-1897	2- 6-1918 - x
Ricker, E. J.	5-27-1904	3- 3-1926
Roderick, A. E.	7- 8-1882	11-17-1909 -
Regan, J. P.	2- 1-1922	4-12-1942
Regan, W. P.	3-10-1926	3- 2-1948
Ross, C. H.	6- 9-1904	6-15-1941
Rowen, T. F.	8-28-1902	2-23-1926
Rowland, J. F.	9-28-1904	3- 5-1926
Rozelle, G. L.	3- 4-1895	3- 8-1916 - x
Sabol, A.	4- 8-1920	3-27-1950
Sanderson, R.	9-12-1908	5- 8-1942
Sanderson, T. R.	4- 3-1924	3- 2-1948
Sarpotta, J. A.	4-13-1921	6-16-1941
Sears, W. C.	5-18-1925	8-12-1948
Shaffer, D. G.	8- 7-1881	2- 2-1906 -
Shea, J. C.	7-12-1919	10-14-1941
Shea, L. D.	5-30-1911	7-26-1941
Shedin, J. E.	5-29-1901	8-10-1926
Shimshock, J.	8-10-1900	12-31-1919 - x
Shollock, A.	4- 3-1900	1-12-1918 - x
Shovlin, E. J.	12-27-1898	4-14-1920 - x
Skelly, L. J.	12-10-1897	6-29-1918 - x
Skelly, L. J., Jr.	9-27-1924	8-10-1948
Snee, F. L.	2-13-1922	4-14-1945
Snee, J. J.	2-19-1925	2-25-1948
Snyder, A.	4-26-1900	11- 8-1926
Spall, E. A.	4-10-1908	5-12-1942
Stackhouse, G. W.	3-11-1887	1-27-1918 -
Stair, R. L.	11-30-1904	1-21-1944
Swartz, E. R.	2-17-1922	3- 1-1942
Talarico, G. A.	5-27-1919	3-23-1950
Thomas, A. J.	3- 6-1918	3-26-1942
Thomas, J. L.	1 - 8-1922	8-10-1948
Thomas, J.	10-23-1914	4-16-1942

TRAINMENSHEET NO. 6

<u>NAME</u>	<u>DATE OF BIRTH</u>	<u>DATE ENTERED SERVICE</u>
Thompson, E. J.	8- 4-1920	2-17-1942
Tierney, J. F.	2-22-1909	2-22-1942
Topping, A.	5-29-1893	11- 9-1928
Tosh, J. P.	4-15-1919	4- 3-1942
Trainor, E. S.	9- 8-1883	10- 3-1903 -
Udvyne, E.	6- 3-1899	12-13-1926
Udvyne, W.	3-14-1896	8-26-1920 - +
Usher, T.	4-14-1892	10- 2-1914 -
Vannan, R.	1-14-1892	4-18-1914 - +
VanVorst, H.	10-23-1898	8-25-1920 -
Varrato, J. F.	4- 8-1912	6-17-1941
Vivian, C. H.	5- 7-1911	3-31-1942
Vrobel, A. J.	5-12-1926	2-29-1948
Wade, F.	11- 2-1894	10-31-1915 -
Wade, E. A.	9-22-1918	9-21-1941 -
Wall, G. H.	12-10-1890	6- 3-1918 - X
Walsh, C. F.	2-15-1899	4-17-1920 - X
Walsh, D. A.	7- 4-1898	4-23-1920 -
Walsh, E. M.	6-28-1931	3-21-1950
Walsh, F. E.	6- 8-1889	8-11-1920 -
Walsh, F. P.	2-15-1901	6-22-1920 - X
Walsh, J. J.	2-26-1902	12- 8-1928
Walsh, J. P.	9-24-1920	3-13-1942
Washburn, C. O.	11- 3-1890	10- 7-1914 -
Wayman, C., Jr.	1- 5-1922	3-23-1950
Wayman, M. A.	12-14-1908	4-17-1945
West, R. L.	2- 9-1928	3-23-1950
Wetzel, H. A.	8- 2-1895	1-22-1923
White, J. L.	3-31-1903	11-27-1928
Williams, A. J.	6-19-1893	11-21-1919 - +
Williams, R. D.	1- 4-1891	12-11-1913 -
Williams, W. J.	10-13-1915	2-24-1948
Willis, J. W.	9-23-1898	10- 1-1917 -
Wilson, J. R.	6- 9-1925	3-22-1950
Witts, L. T.	5-25-1926	2-25-1948
Woody, J. J.	1-18-1919	7-24-1941
Woody, J. A.	12-22-1898	8- 3-1917 -
Wright, H.	9-18-1898	8-29-1917 -
Yencho, J.	1- 3-1891	8- 7-1912 -
Zavacky, A.	3- 5-1909	3-27-1945
Zelinski, J.	7- 9-1897	6- 8-1918 -
Ziegler, P. M.	4-19-1896	2-27-1926

NAME	ENGINEER		DATE ENTERED SERVICE
	DATE OF BIRTH		
Alexander, Gilbert	8-6-1885	-	1-12-1910 -
Atherton, Kenneth	7-22-1893		12-12-1912
Bacon, Rexford	4-19-1887		1-19-1908 -
Bayley, Judson	9-14-1896		+ 8-13-1916
Becker, F. J.	2-16-1895		1-23-1917
Belden, Russell	7-6-1889		2-8-1909 -
Breese, L. M.	10-12-1889		8-18-1910 -
Burnett, F. A.	7-31-1887		+ 11-9-1911 -
Bursavich, Geo.	11-17-1892		+ 1-6-1915
Clouser, George	4-1-1884	-	8-20-1905 -
Gollins, A. J.	4-5-1887		12-8-1912
Denney, Ralph	4-6-1888		+ 9-28-1906 -
Dietrich, Anton	6-23-1889		8-15-1910 -
Dimmick, W. H.	2-11-1893		12-8-1912
Dix, Lester A.	10-7-1894		+ 5-22-1914
Evans, Thomas	1-28-1882	-	+ 3-24-1913
Fitch, E. H.	9-25-1893		+ 8-21-1914
Hankinson, F. W.	4-30-1883	-	4-9-1908 -
Harding, Thos.	2-10-1891		+ 8-26-1914
Hatfield, Walter	3-19-1884	-	11-21-1902 -
Hathaway, F.	4-28-1891		+ 10-13-1909 -
Hinton, G.	7-23-1882	-	1-31-1905 -
Homan, Boyd	5-24-1888		7-2-1913
Hubbard, R. R.	10-6-1892		3-23-1913
Humiston, E.	3-23-1891		8-14-1916
Kersteeen, R.	8-9-1890		1-11-1911 -
Lee, Maurice	4-11-1894		10-23-1915
Leuthold, A.	8-31-1878	-	7-16-1912
Linskins, Geo.	2-15-1888		1-7-1913
Maloney, J. C.	6-1-1893	1896	+ 8-1-1914
Marsh, F. H.	11-14-1894		7-21-1912
Matthews, A. W.	2-22-1888		12-16-1910 -
McBride, Jos.	4-13-1882	-	11-4-1917
McCann, Ray	10-22-1894		+ 5-21-1914
McCormack, W.	11-11-1890		+ 8-22-1911 -
Merrigan, W. P.	4-22-1897		5-23-1914
Montgomery, B. B.	10-7-1896		+ 1-8-1916
Morgan, C. R.	1-30-1896		+ 1-16-1916
Morgan, G. C.	11-4-1892		+ 7-24-1912
Moylan, M.	6-1-1887		11-25-1907 -
Muir, W. G.	10-16-1885	-	4-25-1909 -
Muldoon, J. F.	2-2-1889		4-3-1914
Myers, Jos.	8-8-1890		8-28-1910 -
Nagle, E.	9-25-1882	-	1-10-1905
Neals, John	3-20-1897		+ 8-15-1916
Neuser, A. A.	8-23-1893		+ 4-2-1914
Pearce, W. L.	3-7-1888		6-26-1914

ENGINEERSSheet No. 2

<u>NAME</u>	<u>DATE OF BIRTH</u>	<u>DATE ENTERED SERVICE</u>
Post, B. C.	4-29-1890	+ 1-11-1910 -
Price, H. M.	9-16-1883 -	1-10-1909 -
Raeder, M. L.	5-21-1892	- 3-23-1914
Richards, P. F.	2-15-1889	10-3-1912
Reselle, H.	6-21-1884 -	11-13-1906 -
Sampson, Wallace	3-22-1884 -	9-3-1910 -
Sembrat, John	5-12-1896	- 11-25-1915
Seward, C. P.	6-29-1893	4-26-1914
Smith, Leo	11-5-1890	2-9-1916
Snyder, Stanley	4-27-1883 -	11-27-1911 -
Spangenburg, R.	9-4-1888	- 11-14-1910 -
Thomas, Leslie	6-22-1889	- 11-1-1910 -
Tinklepaugh, A. G.	10-9-1888	12-1-1911 -
Toolan, W. L.	5-22-1893	3-26-1914
Truax, Henry	6-4-1882 -	7-14-1907 -
Washburn, R.	12-20-1888	12-15-1909 -
Weckel, August	4-18-1885 -	8-26-1912
Williams, Geo.	2-22-1890	10-27-1915

FIREMEN

<u>NAME</u>	<u>DATE OF BIRTH</u>	<u>DATE ENTERED SERVICE</u>
Alampi, A. G.	2-21-1920	4-21-1942
Atkinson, P. J.	3-24-1916	3-22-1950
Barnes, M.	7- 7-1904	6-14-1941
Berry, J. M.	12-26-1916	10- 2-1941
Bellie, L.	4- 7-1888	9- 5-1917
Berry, J. P.	7- 3-1918	3-22-1950
Bifano, S. J.	9-20-1917	3- 7-1942
Bowell, S.	2- 7-1903	3-17-1926
Bronson, M.	12- 5-1904	12- 2-1926
Bruch, C. T.	6-13-1894	7-11-1917
Bruch, E. P.	6-10-1897	5-26-1920
Burdick, I. H.	3- 1-1898	5-12-1920
Burnett, C. J.	1-14-1904	2-27-1923
Burns, R. J.	12- 5-1928	3-26-1950
Button, M. E.	11-22-1890	10-31-1917
Carlson, D. W.	10-24-1917	3- 8-1942
Chaykovsky, A. S.	10-31-1916	5- 9-1942
Collins, J. F.	10-10-1920	4-26-1942
Correll, S. L.	2 -8-1899	8- 4-1923
Corrigan, B. A.	11-16-1896	4-24-1920
Crane, F. X.	10-18-1914	3-25-1942
Cuff, J. R.	6- 6-1912	8-31-1941
Curtis, F. L.	11- 7-1918	10- 7-1942
Dearie, J. L.	11- 9-1914	4-29-1942
Dietrich, J. J.	7- 1-1898	2-16-1916
Dimmich, W. H., Jr.	7-13-1917	3-24-1942
Dixon, C. W.	6-26-1897	5-14-1920
Doyle, W. E.	7-10-1913	3-19-1942
Drake, R. F.	2-25-1897	3-30-1920
Fenton, J. J.	7-17-1901	7-18-1941
Fenton, J. J., Jr.	6-14-1927	8-10-1948
Fenton, W.	10-19-1890	8-12-1918
Fladd, J. A.	1-30-1892	12- 8-1917
Gaynor, R. J.	11-28-1913	10- 2-1941
Gaynor, W. R.	4- 3-1919	8-27-1941
Gill, B. T.	11-14-1918	8-27-1941
Gilmartin, J. R.	9-17-1915	8-30-1941
Gilroy, J. M.	4-29-1901	3-20-1926
Goodrich, R. H.	7-17-1886	11- 7-1917
Goodrich, Robt.	4-11-1914	8-31-1941
Greig, C. J.	8-25-1913	8-30-1941
Greenevor, E. J.	11-15-1893	4-22-1918
Harkenreader, S. P.	12- 6-1918	4-29-1942
Hauze, J. R.	5-22-1892	9-20-1920
Haynes, R. G.	12- 5-1912	3-22-1950
Hendrickson, J. L.	3-31-1907	3-19-1926
Hobbs, G. W.	12-22-1915	8-29-1941
Hove, E. D.	1-17-1895	2- 1-1917
Hunt, M. C.	3-28-1895	5- 2-1917
Jakes, L. G.	5-26-1924	3-21-1950
Judge, J. J.	6-11-1912	10- 7-1941

FIREMEN

SHEET NO. 2

<u>NAME</u>	<u>DATE OF BIRTH</u>	<u>DATE ENTERED SERVICE</u>
Kelly, R. J.	10-17-1929	3-23-1950
Kennedy, H. L.	9-19-1891	9-7-1917
Kennedy, R. H.	7-19-1896	5-24-1920
Kilgannon, E. J.	6-1-1915	4-15-1942
Koury, M. F.	10-11-1930	3-27-1950
Livsey, J. P.	3-4-1898	3-3-1920
Loftus, John J.	11-16-1926	8-8-1948
Mea, F. L.	8-28-1903	3-10-1926
Lynady, J. J.	10-16-1918	4-26-1942
Lynch, J. P.	4-6-1927	3-27-1950
Malloy, T. J.	5-18-1925	3-21-1950
Mancuso, A. J.	9-23-1915	5-3-1942
Mazza, A. P.	7-12-1914	5-1-1942
Metzger, R. P.	11-30-1931	3-27-1950
Moylan, T. E.	10-28-1914	10-2-1941
Mua, J. J.	7-13-1915	3-21-1950
McDonough, H. A.	5-10-1917	8-10-1948
McDonough, W. J.	12-19-1916	4-25-1942
McFadden, P. J.	3-4-1894	4-25-1917
McGinley, J. P.	10-16-1894	6-2-1920
McGroarty, D. J.	3-23-1920	8-8-1948
McMullen, B. W.	7-16-1892	1-19-1918
McNulty, J. J.	9-18-1927	8-7-1948
Nelson, E. J.	12-6-1922	3-23-1950
Nemets, J.	7-1-1898	3-1-1920
O'Brien, B. G.	8-22-1927	8-8-1948
Packer, J. E.	10-31-1899	3-4-1918
Phillips, G. W.	5-26-1892	5-1-1918
Phillips, O. P.	9-2-1898	8-17-1917
Ratajenski, T.	8-2-1888	6-25-1918
Reynolds, B. F.	3-24-1899	6-16-1941
Rose, B. H.	6-15-1913	4-22-1942
Rosser, C. E.	11-22-1893	5-6-1918
Rouland, T. F.	2-10-1921	8-7-1948
Saam, F. M.	2-5-1901	3-19-1926
Searfoss, H.	12-16-1892	8-17-1918
Sommet, S.	12-10-1898	10-18-1919
Shaffer, W. G.	7-13-1912	10-12-1941
Shelf, G. E.	7-5-1894	11-28-1917
Sheridan, J. J.	10-20-1919	10-12-1941
Shidal, F.	3-15-1890	8-14-1917
Smith, L. H.	11-6-1894	8-29-1917
Snyder, J. V.	7-1-1903	3-19-1926
Stash, A. H.	11-13-1888	8-2-1918
Stevenson, A. W.	3-9-1894	12-18-1917
Surdoval, W. A.	5-7-1911	3-24-1942
Swan, R. D.	11-7-1927	8-8-1948
Sweeney, J. E.	9-27-1911	8-28-1941
Symons, R. D.	2-12-1912	8-25-1941
Toolan, J. B.	3-19-1915	3-16-1942
Toole, J. V.	6-16-1896	5-11-1920
Unis, E. J.	6-3-1927	3-22-1950
Usher, G. R.	2-21-1923	8-7-1948
Vernau, A. W.	1-24-1897	5-16-1920
Wagner, G. P.	10-2-1914	9-6-1941
Ward, J. F.	2-16-1929	3-27-1950
Wilcox, P. H.	10-13-1913	5-17-1942
Zehseky, E. E.	6-12-1912	10-15-1941

SWITCHTENDERS

<u>NAME</u>	<u>DATE OF BIRTH</u>	<u>DATE ENTERED SERVICE</u>
BRAIN, C. J.	1- 7-1891	1-31-1923
BRENNAN, A. J.	9- 8-1906	2-21-1926
COXE, W. E.	6- 2-1899	4- 4-1942
GIGLIOTTI, P. J.	9-21-1925	3-30-1950
HENCHER, S. M.	7-28-1914	11-1-1942
HUNT, R. M.	11-28-1917	4- 9-1945
KILHULLEN, A. J.	11-30-1897	4-30-1942
KILHULLEN, A. J., JR.	12-23-1928	11-29-1949
MOFFITT, J. R.	10- 9-1886	11- 5-1924
MUIR, J. W.	9-24-1914	3-17-1950
PETERS, R. D.	6 -1-1904	7- 6-1921 -
PETRYLAK, J. J.	3-16-1931	3-28-1950
POPICK, J.	6-18-1903	11-24-1943
REYNAR, J. L.	9-10-1907	8-26-1926
ROBINSON, D. A.	9-21-1903	7-15-1921 -
ROSLER, W. A.	9- 2-1916	3-15-1950
SCARZAFAVA, J. A.	1-23-1910	8-12-1950
SERANNI, P.	10-20-1891	9-14-1917 -
SHANNON, R. E.	7- 5-1899	9-17-1920 -
SMITH, P. G.	6-26-1906	7-28-1926
VOJICK, J. J.	5- 7-1920	8-13-1950
WILLIAMSON, R.	10-30-1923	2-16-1950

1950
1886

THE DELAWARE AND HUDSON RAILROAD CORPORATION

DATE OF BIRTH AGENTS AND TELEGRAPHERS.

1.	E. M. Michaels	June 14, 1883
2.	W. E. Tayler	Aug. 11, 1884
3.	J. H. Lynch	Sept. 22, 1886
4.	M. K. Kernan	Oct. 24, 1886
5.	W. A. Johns	Jan. 4, 1887
6.	J. J. McNulty	June 23, 1888
7.	C. L. Frost	Oct. 18, 1888
8.	D. W. Williams	Nov. 25, 1889
9.	O. B. Romich	May 26, 1890
10.	H. H. Fink	Nov. 6, 1890
11.	G. E. Pizer	Mar. 16, 1891
12.	G. W. Fry	June 11, 1891
13.	J. E. Loftus	June 24, 1892
14.	A. L. Robson	Sept. 24, 1892
15.	B. V. Sheehan	Feb. 18, 1893
16.	J. B. Powell	Mar. 13, 1894
17.	T. A. Hopkins	May 9, 1894
18.	J. P. Judge	Mar. 22, 1895
19.	T. J. Sheridan	Sept. 10, 1895
20.	A. R. Morris	Mar. 2, 1896
21.	H. S. Coons	June 18, 1896
22.	N. Howarth	Sept. 4, 1896
23.	H. Snyder	June 4, 1897
24.	P. F. Mc Dermott	July 22, 1897
25.	R. C. Gerhardt	Aug. 8, 1897
26.	F. R. Roberts	May 21, 1898
27.	J. P. Shea	Aug. 3, 1898
28.	C. S. Smith	Sept. 22, 1898
29.	J. J. Mullen	Dec. 12, 1899
30.	Geo. Brown	Aug. 6, 1900
31.	T. J. Langan	Nov. 17, 1900
32.	G. A. Gower	Dec. 7, 1900
33.	P. J. Devaney	Feb. 17, 1901
34.	G. R. Thomas	Dec. 11, 1901
35.	E. V. Coons	Feb. 13, 1903
36.	P. M. Sheridan	Oct. 25, 1904
37.	M. G. Gerrity	Oct. 14, 1906
38.	T. T. Brooks	Sept. 10, 1910
39.	E. J. Pearce	Oct. 16, 1912
40.	A. P. Bagdonas	Mar. 13, 1913
41.	M. G. Treat	Oct. 19, 1921
42.	M. J. Delfino	Nov. 6, 1921
43.	J. W. McCann	Mar. 2, 1922
44.	E. L. Henahan	Nov. 6, 1922
45.	P. M. Lepore	Nov. 29, 1922
46.	E. F. Burke	Oct. 16, 1923
47.	T. C. Burke	Oct. 24, 1923
48.	T. F. Langan	Jan. 24, 1924
49.	N. R. Brown	Mar. 19, 1924
	J. R. Hatala	Sept. 8, 1927
	J. J. Skuban	Oct. 2, 1929
	V. Costa	Nov. 7, 1929
	Costa	Jan. 4, 1931
	Brown	May 23, 1932

1962

THE DELAWARE AND HUDSON RAILROAD
CORPORATION
PENNSYLVANIA SUBDIVISION

ROSTER OF TRAINMEN

NOVEMBER 1, 1962

1.	YC - Collins, John P.	51.	C - Norris, Jess G.
2.	YC - Feldman, Jacob J.	52.	Matircho, John M.
3.	YC - O'Keefe, Maurice F.	53.	McDonough, Joseph J.
4.	YC - Wade, Frank G.	54.	YC - Snyder, Alfred
5.	C - Lewis, Edwin W.	55.	C - Skelly, Louis J.
6.	YC - McDonnell, Thomas P.	56.	McLaughlin, John L.
7.	C - Boyle, James J.	57.	Clarke, Joseph W.
8.	C - Woody, Joseph A.	58.	C - Collins, William F.
9.	C - McCann, Thomas A.	59.	Ross, Claude M.
10.	C - Gallagher, Gerald X.	60.	McDonnell, Thomas W.
11.	C - Carden, Joseph L.	61.	YC - Gill, Raphael J.
12.	C - Willis, John W.	62.	C - Hunt, Amos H.
13.	C - Murphy, Joseph A.	63.	C - Varrato, Joseph F.
14.	Ccmiskey, Charles J.	64.	C - Jordan, Harry M.
15.	C - Keeney, James M.	65.	Brady, Hubert
16.	C - Barrett, James F.	66.	C - Dirner, John T.
17.	Shollock, Alexander E.	67.	C - Clark, Joseph A. Jr.
18.	Richards, Lewis T.	68.	YC - Gallagher, John J.
19.	Brownell, Donald J.	69.	C - Shea, Leo D.
20.	Zelinski, John	70.	C - Rau, Carl O.
21.	Reynolds, Rual L.	71.	C - Corcoran, Russell J.
22.	C - Lee, George T.	72.	Lingertot, Ernest R.
23.	YC - Nevins, Bernard A.	73.	Clune, James E.
24.	C - Devaney, Edward F.	74.	YC - Mason, Francis B.
25.	C - Shimshock, Joseph P.	75.	YC - Gibson, Wade J.
26.	YC - Shovlin, Eugene J.	76.	YC - Addley, Robert J.
27.	C - Kelly, Bernard F.	77.	YC - Baldwin, Harry
28.	C - Gerrity, Joseph F.	78.	YC - Beebe, Benjamin
29.	Hubert, Albert L.	79.	C - Murray, Patrick J.
30.	YC - Lake, Frank	80.	Wade, Edward A.
31.	YC - Burns, Francis P.	81.	C - Flynn, Thomas M.
32.	YC - McDonough, Anthony J.	82.	McDonald, Leo F.
33.	Rowan, Thomas F.	83.	YC - Murphy, Austin R.
34.	YC - Lane, Ralph J.	84.	YC - Fine, Merle M.
35.	Dee, William	85.	C - Pissott, Charles F.
36.	YC - Sheerin, James E.	86.	Fortune, John R.
37.	YC - Montgomery, Robert	87.	YC - Shea, John C.
38.	Heenan, Joseph T.	88.	YC - Gritman, Paul
39.	C - Becker, Joseph G.	89.	C - McDermott, William E.
40.	YC - Dougherty, Francis E.	90.	YC - Egan, Thomas R.
41.	YC - Lawler, Philip J.	91.	YC - Thompson, Edward J.
42.	YC - Beyer, Martin A.	92.	Burns, Daniel J.
43.	YC - Herron, Vincent P.	93.	YC - Tierney, James F.
44.	C - Pauly, John J.	94.	Mussari, Charles H.
45.	C - Osnick, George M.	95.	YC - Burke, Thomas L.
46.	YC - Updyke, Elmer	96.	YC - Fayne, Richard M.
47.	Hadvanee, Michael	97.	YC - Nesler, Emmett T.
48.	YC - Walsh, James J.	98.	Bynon, Bernard A.
49.	Langan, Martin J.	99.	Proferes, Gus J.
50.	Walsh, Charles F.	100.	YC - Paddick, George M.

11/1/62

ROSTER OF TRAINMEN

101.		Reilly, Joseph F.	151.		Witts, Lewis T.
102.	YC -	Walsh, John F.	152.		Snee, James J.
103.	YC -	Hanlon, James A.	153.		Fisher, James V.
104.	YC -	O'Neil, Harry W.	154.		Lestrangle, Thomas V.
105.		Liparula, John F.	155.		Proeller, William H.
106.	C -	Ogden, William F.	156.		McKee, Frank E.
107.		Emmert, John J.	157.		Fletcher, Alan E.
108.		Gill, Walter F.	158.		Herron, Bernard G.
109.	C -	Juzwiak, Clarence S.	159.		Vrobel, Andrew J.
110.	YC -	Jacobson, William A.	160.		Gavin, James G.
111.	YC -	Dmuchoski, Alexander J.	161.		Rogan, William P.
112.		Thomas, Arthur J.	162.		Sanderson, Thomas R.
113.		Ezman, William	163.		Devaney, Thomas E.
114.		Barrett, Robert J.	164.		Thomas, John L.
115.	YC -	Vivian, Charles H.	165.		Purcell, Patrick A.
116.		McHugh, Joseph M.	166.		Osborne, Dean V.
117.	YC -	Proeller, George E.	167.		Skelly, Louis J. Jr.
118.	YC -	Tosh, John P.	168.		Davies, Edward D.
119.		Amos, Charles	169.		Gibbons, John J.
120.		Frail, John C.	170.		Mosley, Thomas J. Jr.
121.	YC -	Ide, Elwood C.	171.		Sears, William C.
122.	YC -	Moran, Paul T.	172.		Casper, George A.
123.		Rogan, James P.	173.		Ball, Irving H. Jr.
124.	YC -	McAndrew, John J.	174.		Loftus, John J.
125.		Thomas, John Jr.	175.		Walsh, Edward M.
126.	C -	Barrett, Joseph P.	176.		Leotti, John A.
127.		Battle, Edward S.	177.		Perry, Frank J.
128.		Carey, William A.	178.		Burke, Thomas J.
129.		Belardinelli, Armando J.	179.		Wilson, John R.
130.		Mulrooney, Joseph P.	180.		Moran, William B.
131.		Healey, Charles R.	181.		Moffitt, Edward F.
132.		Hall, Joseph A.	182.		Wayman, Claude Jr.
133.		Sanderson, Robert	183.		Carden, James A.
134.		Spall, Edward A.	184.		Duffy, Leo, J r.
135.		Christ, Charles F.	185.		Talerico, Clement A.
136.		Stair, Raymond L.	186.		Coxe, Joseph J.
137.		Coreoran, William H.	187.		West, Robert L.
138.		Parry, Norman W.	188.		McNulty, Nicholas G.
139.		Zavacky, Andrew	189.		Sabol, Andrew
140.		Hankey, Raymond R.	190.		Paddick, Stephen A.
141.		Oakley, Anthony C.	191.		Hanagan, William B.
142.	YC -	Shee, Francis L.	192.		Murphy, John L.
143.		Wayman, Maurice A.	193.		Gallagher, Thomas J.
144.		Kohut, Michael	194.		Havard, Elwood
145.		Williams, William J.	195.		Elliott, Matthew J.
146.		McNulty, Dennis M.	196.		Lewis, James B.
147.	YC -	Coxe, Edward R.	197.	SW -	Shannon, Rollin
148.		Jordan, Edmund S.	198.	SW -	Peters, Russell
149.		Brady, David G.	199.	SW -	Robinson, David
150.		Norton, John J.	200.	SW -	Smith, Paul

11/1/62

ROSTER OF TRAINMEN

201. SW - Reynar, John
202. SW - Kilhullen, Ambrose J.
203. YC - Hencheck, Stephen M.
204. SW - Popick, John
205. SW - Hunt, Rexford
206. SW - Kilhullen, Ambrose J. Jr.
207. SW - Williamson, Robert
208. SW - Rosler, William A.
209. C - Muir, Joseph W.
210. SW - Petrylak, Joseph
211. SW - Gigliotti, Patrick
212. SW - Scorzafava, John A.
213. SW - Vojick, John J.
214. SW - Horan, Thomas J.
215. Farrell, Joseph A.
216. Walsh, Jerome A..

C - EMERGENCY CONDUCTOR
YC - YARD CONDUCTOR
SW - SWITCHTENDER SENIORITY

11/1/62

1963

**COMPANY BULLENTIN FOR OPERATING
RULES CLASS**

**LIST OF EMPLOYEES DUE FOR CLASS ON
PENN. DIVISION**

THE DELAWARE AND HUDSON RAILROAD
Corporation
BULLETIN NO. 57

Albany, New York
September 27, 1963
011.21

ALL CONCERNED:

Following employees are now due for two year oral examination in the Operating Rules according to individual qualifications. The Trainmasters and Assistant Trainmasters at the various terminals will schedule classes as necessary in order that these examinations may be accomplished as soon as possible but in no event later than December 31, 1963.

Notices of Rules Classes will be posted on the Bulletin Boards at the various terminals and each employee listed will make necessary arrangements for examination.

ADDLEY ROBERT J	1006 T	PA
ALAMPI ANTHONY G	0023 F	PA
AMOS C	1010 T	PA
BALDWIN H	1021 T	PA
BARNES M G	0100 E	PA
BARRETT JOSEPH P	1076 T	PA
BARRETT JAMES F	1042 T	PA
BARRETT R J	1037 T	PA
BARRY J M	0045 F	PA
BAYLEY J O	0055 E	PA
BECKER J G	1110 T	PA
BEEBE B	1033 T	PA
BELARDINELLI A J	1053 T	PA
BEYER M A	1116 T	PA
BIFANO SAMUEL J	0062 F	PA
BOWELL S G	0092 F	PA
BOYLE JAMES J	1055 T	PA
BRADY JOHN J	5260 YM	PA
BRENNAN F B	1089 T	PA
BROWN STANLEY A	1060 C	PA
BROWNELL D J	1091 T	PA
BRUCH CHARLES T	0064 E	PA
BRUCH EDWARD P	0097 E	PA
BURDICK IRVING H	0095 E	PA
BURKE T L	1070 T	PA
BURNETT C J	0098 E	PA
BURNETT FRANK A	0065 E	PA
BURNS D J	1058 T	PA
BURNS FRANCIS P	1101 T	PA
BURSAVICH G A	0066 E	PA
BYNON B A	1051 T	PA
CADDEN JOHN F	1548 YM	PA
CARDEN J L	1199 T	PA
CARDEN JAMES A	1184 T	PA
CARDEN T R	1231 C	PA
CAREY WILLIAM A	1197 T	PA
CARLSON D W	0110 F	PA

CHRIST C F	1202 T PA
CLARK JOSEPH A JR	1228 T PA
CLARKE JOSEPH A SR	1248 C PA
CLUNE J E	1211 T PA
CLUNE PAUL P	1212 C PA
COLLINS JAMES A	4816 YM PA
COLLINS J P	1215 T PA
COOKE WALTER J	1375 YM PA
CORCORAN RUSSELL J	1218 T PA
CORCORAN WILLIAM H	1213 T PA
CORRELL S L	0154 E PA
CORRIGAN BERNARD A	0144 E PA
COXE WALTER J	5974 YM PA
CRANE F X	0131 F PA
CUFF J R	0118 F PA
DAUGHERTY CLARENCE W	1391 C PA
DAUGHERTY F E	1446 T PA
DEE W D	1443 T PA
DEVANEY EDWARD F	143 T PA
DIMMICK WM H JR	018 F PA
DIRNER J T	1435 T PA
DIX L A	0194 E PA
DMUCHOSKI A J	1403 T PA
DOWLING DENNIS L	1533 YM PA
DOWLING JOSEPH J	1506 YM PA
DOYLE W E	0183 F PA
DRAKE R F	021 E PA
EGAN T R	1511 T PA
ELLIOTT MATTHEW J	1508 T PA
EMMERT J J	1509 T PA
EZMAN W J	1518 T PA
FARR CLARENCE R	5679 YM PA
FELDMAN JACOB J	1526 T PA
FENTON J J SR	0278 E PA
FENTON J J JR	0257 F PA
FINE M M	1544 T PA
FITCH EDMUND H	0263 E PA
FLYNN T M	156 T PA
FOOTE FRANCIS P	1542 C PA
FORTUNE J R	1523 T PA
FRAIL J C	1557 T PA
FREAR CARL R	154 C PA
GALLAGHER G X	1623 T PA
GALLAGHER J J	166 T PA
GALLAGHER T J	1624 T PA
GAVIN J G	1629 T PA
GAYNOR R J JR	0294 F PA
GAYNOR WILLIAM R	0306 F PA
GEESEY NELTSON	1631 C PA
GERRITY J F	1657 T PA
GIBBONS J J	1671 T PA
GIBSON W J	1638 T PA
GILL B T	0295 F PA
GILL RAPHAEL J	162 T PA
GILL WALTER F	1658 T PA
GILMARTIN J R	029 F PA
GILROY JOHN M	0318 F PA

GOODRICH ROBERT S	0300	F	PA
GRITMAN PAUL A	1645	T	PA
HADVANCE M	1810	T	PA
HALL J A	1721	T	PA
HANLON J A	1717	T	PA
HARDING THOMAS	0343	E	PA
HARKENREADER S P	0324	F	PA
HAYNES R G	0327	F	PA
HECK JOHN N JR	5362	YM	PA
HENDRICKSON J L	0386	F	PA
HERRON V P	1808	T	PA
HOBBS GEORGE W	5310	F	PA
HORAN PATRICK J	1803	C	PA
HOYLE ARTHUR R	1531	YM	PA
HUNT A H	1730	T	PA
IDE ELWOOD C	1856	T	PA
JACOBSON W A	1872	T	PA
JORDAN H M	1880	T	PA
JUZWIAK CLARENCE S	1868	T	PA
KEATING PATRICK J	1941	C	PA
LAKE F	2084	T	PA
LANE R J	2090	T	PA
LANGAN M J	2077	T	PA
LAWLER PHILLIP J	2097	T	PA
LEE G T	2078	T	PA
LEWIS EDWIN W	2049	T	PA
LIPARULA JOHN F	2060	T	PA
LOFTUS D J	2070	C	PA
LOFTUS H J	2063	C	PA
LOFTUS JACK A	2064	C	PA
LOFTUS J J	0472	F	PA
LUCE F L	0480	F	PA
LYNADY J J	0466	F	PA
MALLOY T J	0492	F	PA
MALONEY JOHN C	0514	E	PA
MANCUSO A J	0508	F	PA
MASON F B	2268	T	PA
MAZZA A P	0487	F	PA
MCANDREW JOHN J	2168	T	PA
MCCANN JOSEPH P	2222	C	PA
MCCANN R J	0485	E	PA
MCCORMACK WM H	050	E	PA
MCDERMOTT W E	2235	T	PA
MCDONALD L F	2225	T	PA
MCDONNELL T W	218	T	PA
MCDONOUGH A J	2337	T	PA
MCDONOUGH JOSEPH J	235	T	PA
MCHUGH JOSEPH M	2242	T	PA
MCLAUGHLIN J L	217	T	PA
MCAHON T	2169	C	PA
MCNULTY J J JR	0496	F	PA
MCNULTY DENNIS M	2243	T	PA
METZGER ROBERT P	0531	F	PA
MISKELL JAMES J	1169	YM	PA
MORAN JOSEPH J	226	C	PA
MORAN P T	2227	T	PA
MORGAN CLARENCE R	052	E	PA
MORGAN GLENN C	0522	E	PA

MOYLAN T E	049 F PA
MUIA JOSEPH J	0502 F PA
MULROONEY J P	2234 T PA
MURPHY A R	2255 T PA
MURPHY JOSEPH A	2259 T PA
MURRAY P J	2251 T PA
MUSSARI C H	2239 T PA
NEALS J A	0598 E PA
NEMETZ J	0601 E PA
NESLER E T	2402 T PA
NEUSER ANDREW A	0599 E PA
NEVIN B A	2391 T PA
NORRIS J C	2404 T PA
O DONNELL EDMUND A	8024 YM PA
OBRIEN BERNARD C	0616 F PA
OGDEN W F	2437 T PA
OKEEFE MAURICE F	2443 T PA
ONEILL H W	2442 T PA
OSNICK G M	2452 T PA
PACKER JOHN E	0651 E PA
PADDICK G M	2508 T PA
PAULY JOHN J	2516 T PA
PAYNE R M	2484 T PA
PISSOTT CHARLES F	2489 T PA
PROELLER G E	2483 T PA
PROELLER W H	251 T PA
RAEDER MURLAND L	0691 E PA
RAU C O	2565 T PA
REILLY JOSEPH F	2551 T PA
REYNAR WILLIAM H	1523 YM PA
REYNOLDS ERNEST F	0706 E PA
REYNOLDS R L	2544 T PA
RHODES ROBERT N	1466 YM PA
RICHARDS LEWIS T	2571 T PA
ROGAN J P	2561 T PA
ROSE ELLSWORTH H	0692 F PA
ROSS C M	258 T PA
ROWLAND JOSEPH F	2585 C PA
RUDDICK W J	2569 C PA
SAAM FREDERICK M	0783 F PA
SEBRAT J	0746 E PA
SHEA J C	2693 T PA
SHEA L D	267 T PA
SHEERIN J E	2712 T PA
SHERIDAN J J	0734 F PA
SHIDAL FRANK	0739 E PA
SHIMSHOCK JOSEPH P	2696 T PA
SHOLLOCK ALEXANDER E	2641 T PA
SHOVLIN E J	2699 T PA
SKELLY L J SR	2679 T PA
SMITH LEON H	0743 E PA
SNYDER ALFRED	2713 T PA
SNYDER J V	074 F PA
SPALL E A	2647 T PA
SPANGENBURG ROY L	0736 E PA
SURDOVEL W A	0726 F PA
SWEENEY J E	075 F PA

THOMAS A J
THOMAS J JR
THOMAS LESLIE H
THOMPSON E J
TIERNEY J F
TOOLAN J B
TOOLE J V
TOSH J P
UPDYKE E
VARRATO JOSEPH F
VIVIAN CHARLES H
WADE E A
WADE F
WALSH CHARELS F
WALSH FRANCIS P
WALSH J F
WALSH J J
WARD JOSEPH F
WHEELER MALCOLM
WILLIAMS WILLIAM J
WILSON JOHN R
ZEHOSKY E B

2791 T PA
2776 T PA
0823 E PA
2778 T PA
2787 T PA
0824 F PA
084 E PA
2779 T PA
283 T PA
2845 T PA
2841 T PA
2875 T PA
2856 T PA
2902 T PA
2907 C PA
2876 T PA
2923 T PA
0915 F PA
1545 YM PA
2896 T PA
2885 T PA
0950 F PA

H. W. HONTZ

1970

**TREASURER'S MONTHLY STATEMENT FOR
THE UNITED TRANSPORTATION UNION
LOCAL # T-261, CARBONDALE**

LIST OF LOCAL # T-261 MEMBERS

TREASURER'S MONTHLY STATEMENT
UNITED TRANSPORTATION UNION
 Brotherhood of Railroad Trainmen Insurance Department — Brotherhood of Locomotive Firemen and Enginemen Insurance Department

37TH STATEMENT

PLEASE USE **BLACK INK ONLY** IN COMPLETING THIS FORM

80 CASH DISBURSED TO INTERNATIONAL HEADQUARTERS

COL. NO. OF CASH DISB. LED.	NO. OF MBRS.	AMT. PER MBR.	AMOUNT OF FUNDS	
			TREASURER'S REPORT	APPLIED BY G.S. & T.
	65	46	65	46
BLF. & E. LIFE		15	15	15
BLF. & E. A.I.		61	61	61
B.R.T. LIFE		290 45	290 45	290 45
B.R.T. A. & H.		224 80	224 80	224 80
B.R.T. T.B.	72 25	18 00	18 00	18 00
1 TOT. INS. PREM. & T.B.		533 25	533 25	533 25
INT'L DUES	31 80	93 00	93 00	93 00
LEGISLATIVE ASSTS. G	31 150	46 50	46 50	46 50
G.C.A. ASSTS.	6 25	155 00	155 00	155 00
T.P.E.L.		1 50	1 50	1 50
JOB BENEFIT ASSTS.				
2 TOTAL DUES & ASST'S		295 00	295 00	295 00
SUPPLIES		3 69	3 69	3 69
SURETY BOND PREM.				
3 TOTAL OTHER		3 69	3 69	3 69
4 TOTAL REMITTED		832 94	832 94	832 94

REMARKS: 891.94

(TREASURER SHOULD EXPLAIN ANY DIFFERENCES BETWEEN COLUMN HEADED TREASURER'S REPORT AND ACTUAL AMOUNT REMITTED)

G.C.A. ASSESSMENTS

G.C.A. ASSESSMENT NO.	NUMBER OF MEMBERS	AMOUNT PER MEMBER	TOTAL AMOUNT
299	31	5 00	155 00
TOTAL	31		155 00

NUMBER OF MEMBERS

ACTIVE	NUMBERS
ACTIVE	31
RETIRED	64
FURLOUGHED	1
SICK AND DISABLED	7
MILITARY	
OUT OF SERVICE	
OTHER	
TOTAL	103

MEMBERSHIP RECEIPTS REQUIREMENTS

L.C.A. ASSESSMENT	NO. OF MEMBERS	AMOUNT PER MEMBER	TOTAL
INT'L-INS. PREM. & T.B.			533 25
INT'L-DUES & ASSESSMENTS			295 00
LOCAL-DUES			46 50
LOCAL-SPECIAL ASSESSMENTS			51 50
TOTAL	31	75	2325

FOR USE BY G.S. & T.

STAMP DATE RECEIVED: JUN 25 1970

Opened and Counted by: E. F. COLWELL

DRAFT: \$

CERTIFIED CHECK: \$

EX M.O.: \$

P.M.O.: \$

CASH: \$

TOTAL REMITTED: \$

REQUIRED: \$

RECEIVED: \$

SHORTAGE: \$

CLEARED: \$

THIS REPORT MADE AND FORWARDED TO THE INTERNATIONAL HEADQUARTERS THIS 30 DAY OF JUN MO. 70 YR.

William J. Oye
Treasurer Signature

LOCAL NO. 261

FOR CERTIFICATION USE BY G.S. & T.
THIS IS TO CERTIFY THAT THIS IS A CORRECT COPY OF A STATEMENT ON FILE IN THE OFFICE OF THE GENERAL SECRETARY AND TREASURER

FORM 95-100N-7/79

UNITED TRANSPORTATION UNION TREASURER'S BILL

FORM 95-100N-7/79

PLAN	NUMBER	EFF DATE	CODE	NAME	RAILROAD	AGE	# ASSESSMENT OR PREMIUM	T. B.	T. P. E. L.	INTL DUES & LEO'S	G. C. A.	EX MBR	STATUS	AMOUNT	REMARKS
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
NI	1	28030	5 50	ADDLEY ROBERT J		37				1 T 299					
2	1	28030	12 32	AULL FRANK S		44	T 5.09	1						500	
3	2	112080	10 43	BALDWIN HARRY		32	T 5.29	1		1 T 299					
4	2	300756	3 40	BARRETT JAMES F		44	T 2.92	1						1000	
5	2	461875	8 43	BARRETT JAMES F		47	T 3.24							1000	
6	2	41500	2 41	BARRETT JAMES F		45	T 4.72								
7	2	168775	3 46	BARRETT JOSEPH P		25	T 6.70	1		1 T 299					
8	2	99688	2 43	BECKER JOSEPH		39	T 9.32	1		1 T 299					
9	2	169298	4 46	BEEBE BENJAMIN		36	T 6.60	1		1 T 299					
10	2	323096	5 49	BRADY JOSEPH A		45	T 1.50	1							
11	2	303263	2 41	BURCH JOHN A		44	T 5.44	1						2000	
12	6	395751	6 42	BURKE THOMAS L	W	27	T 2.55	1		1 T 299				1000	
13	2	79379	6 42	BURKE THOMAS L		27	T 4.11								
14	2	169254	4 46	BURNS DANIEL J		36	T 6.60	1		1 T 299					
15	2	5 67		CARDEN JAMES A		47				1 T 299					
16	3	21152	7 35	CARDEN RAYMOND M	DE W	32	T 1.18	1						2000	
17	2	307457	7 40	CARDEN ROLLAND	O	39	T 2.52	1						1000	
18	2	431295	8 51	CHESLO JOHN A DEP		54	T 2.10								
19	4	175052	8 69	CLARK JOSEPH A JR	O	48	T 4.80	1		1 T 299				1000	
20	2	19556	9 32	CLARKE JOSEPH A		35	T 3.92	1		1 T 299				2000	
21	2	431254	7 51	CLUNE JAMES		38	T 1.50	1		1 T 299					
22	2	12825	7 32	COLLINS JOHN P	O	38	T 4.68	1						2000	
23	2	2 67		COLLINS WILLIAM F		51				1 T 299					
24	2	119805	12 39	CONNOR MICHAEL J		44	T							1350	
25	2	535063	11 44	CORCORAN WILLIAM H	W	33	T 2.49	1		1 T 299				1000	
26	2	143072	12 44	CORCORAN WILLIAM H		33	T 6.62								
27	2	416199	10 50	CORCORAN WILLIAM H		40	T 2.50								
28	2	563536	5 45	CURCIO PHILIP A JR	W	29	T 1.42	1						2000	
29	2	152452	5 45	CURCIO PHILIP A JR		29	T .80								
30	2	7 16		DAUGHERTY CLARENCE W		23									
31	2	98869	4 37	DOUGHER JOSEPH	O	43	T 5.44	1						2000	
32	6	9602	8 54	EMMONS JOHN H		49	T 6.40	1						1000	
33	2	102645	3 43	EMMONS JOHN H		38	T 4.11								
34	2	230275	1 40	FALING MARVIN L	DE W	31	T 2.35	1						1000	
35	2	569177	3 63	FALING MARVIN L		54	T 8.50								
36	2	119827	12 39	FINLON HUGH J		53	T							1457	
37	2	26067	11 32	FOLEY EDWARD J		44	T 5.22	1						2000	
38	2	71899	3 42	FOLEY EDWARD J		44	T 5.40								
39	2	11 39		FOOTE FRANCIS P		46									
40	2	119912	11 39	GALLAGHER GERALD X	O	42	T 5.28	1		1 T 299				2000	
41	2	70939	2 42	GALLAGHER GERALD X		45	T 8.62								
42	2	142879	12 44	GALLAGHER GERALD X		47	T 2.30								
43	2	79823	6 42	GERRITY JOSEPH F		41	T 8.62	1							
44	2	74957	8 35	GESSLER FRED		39	T 2.21	1						1000	
45	2	463980	8 43	GILL RAPHAEL J	E W	33	T 2.55	1		1 T 299				1000	

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UNITED TRANSPORTATION CO. TREASURER'S BILLING															PAGE	STATE	MONTH
41	PLAN	NUMBER	EFF. DATE	CODE	NAME	RAILROAD	AGE	# ASSESSMENT OR PREMIUM	T. B.	T. P. E. L.	INT'L DUES & LUGS	G. C. A.	EX. MBR.	RETD.	2	PA.	JUN 70
1	AH	198864	7 47		GILL RAPHAEL J		37	T 7.00									
2	HS	323072	5 49		GRIER THOMAS F DEP		46	T 1.90						D			
3	AH	125625	4 44		HOSIE LEONARD T		40	T 7.71	1				1				
4	2	223886	11 39	D	HUNT LESTER R		43	T 2.72	1				1		1000		
5	AH	142888	1 45		HUNT LESTER R		49	T 6.62									
6	AH	169258	4 46		JORDAN HARRY M		39	T 8.70	1		1 T 299						
7	2	210140	7 39		KASE RAYMOND F		48	T 1.62	1				1		500		
8	HS2	435182	10 51		KASE RAYMOND F		60	T 3.80									
9	HS	125453	3 44		KILKER JOSEPH		37	T 1.30	1				1				
10	J 2	1596	8 46	D	LANGAN JAMES		15	T 1.68						J	1000		
11	2	803587	6 51	D	LANGAN MARTIN J		51	T 12.33	1				1		3000		
12	2	780605	4 50	D	LANGAN MARTIN J		50	T 3.96							1000		
13	NI		9 27		LEACH HOWARD		24						1				
14	2	109672	9 37	D	LEE THOMAS		44	T 2.81	1				1		1000		
15	2	204175	3 39	D	LEE THOMAS		46	T 3.01							1000		
16	2	18799	9 32	D	LEWIS EDMUND J		50	T 7.00					1		2000		
17	AO1	548167	1 61		LEWIS EDMUND J		78	T 3.60									
18	2	69185	2 35	D	LITTLE GEORGE T		49	T 9.31	1				1		2763		
19	2	220112	11 39	D	LOFTUS DONALD J		41	T 2.56	1				1		1000		
20	2	5988	8 52	D	LOFTUS DONALD J		54	T 3.75							750		
21	2	32877	1 33		LOFTUS JOHN A NO 1		51	T 6.88					1		2000		
22	2	A4104	11 38	D	LOFTUS JOHN A NO 2		42	T 2.64	1	.25	1 T 299				1000		
23	2	402019	7 42		LONG RALPH A		42	T 10.20	1				1		4000		
24	2	786641	6 50		LONG RALPH A		50	T 3.76							1000		
25	2	786642	6 50		LONG RALPH A		50	T 2.32							615		
26	2	21472	9 32		LOPATA GEORGE J		45	T 5.42	1				1		2000		
27	NI		2 42		MASON FRANCIS		34				1 T 299						
28	NI		2 56		MCANDREW JOHN		37				1 T 299						
29	2	93478	7 32		MCCANN MICHAEL W		48	T					1		2375	REDUCED PD-UP	
30	2	111401	12 39	D	MCCANN THOMAS A		42	T 5.28	1				1		2000		
31	AH	130237	5 44		MCCANN THOMAS A		46	T 6.62									
32	HS	130238	5 44		MCCANN THOMAS A		46	T 1.30									
33	99	844700	8 51	DE W	MCDONALD LEO F		29	T .92	1	.25	1 T 299				500		
34	2	120092	12 39		MCDONALD PATRICK A		44	T 5.22	1				1		2000		
35	HS	318040	12 48		MCDONALD PATRICK A		53	T 3.80									
36	3	5984	8 32		MCDONNELL JAMES F		34	T	1				1		3000	FULLY PAID	
37	2	12831	7 32	D	MCDONNELL THOMAS		39	T 4.82	1				1		2000		
38	HS	308929	3 48		MCDONNELL THOMAS		55	T 8.10									
39	2	363579	10 41	DE W	MCDONNELL THOMAS W		21	T 2.25	1	.25	1 T 299				1000		
40	HS3	431301	8 51		MCDONOUGH JOSEPH J		48	T 1.70	1				1				
41	2	22234	10 32		MCMANAMON WM F		43	T 5.04					1		2000		
42	NI		5 70		MCMANUS GEORGE J		48				1 T 299						
43	2	10950	7 32		MOODY JAMES J		40	T 4.56	1				1		2000		
44	AH	170130	4 46		MORAN JOHN A		40	T 7.60	1				1				
45	NI		6 60		MORAN PAUL T		46				1 T 299						

UNITED TRANSPORTATION UNION TREASURER'S BILLING															PAGE	STATE	MONTH
41	NUMBER	EFF. DATE	CODE	NAME	RAILROAD	AGE	# ASSESSMENT OR PREMIUM	T. B.	T.P.E.L.	INFL. DUES & LESS	G.C.A.	EX. MBS	STAGE	AMOUNT	3	PA.	JUN 70
PLAN	MC.	YR.	CHECK OFF NO.														REMARKS
1	2	396325	6 42	E W	MULROONEY JOSEPH P	30	T 2.40	1		1 T 299				1000			
2	AH	179482	7 46		MUSSARI CHARLES H	36	T 8.70	1		1 T 299							
3	2	220111	11 39	D	NEUTTS CHARLES H	49	T 3.37	1				1		1000			
4	2	363570	10 41	D	NEUTTS CHARLES H	51	T 3.76							1000			
5	HS1	431304	8 51		NEUTTS CHARLES H	61	T 2.10										
6	2	220113	11 39	D	NEVIN BERNARD A	40	T 2.48	1				1		1000			
7	2	216746	9 39		NORRIS JESSE C	40	T 2.28	1				1		1000			
8	TA1	551250	5 61		NORRIS JESSE C	62	T 2.00										
9	NI		4 46		OGDEN WILLIAM F	26				1 T 299							
10	2	85756	7 32	D	OHARA JOSEPH J	43	T 2.72	1				1		1000			
11	HS1	446986	2 52		OHARA JOSEPH J	62	T 8.10										
12	2	119868	10 39		OKEEFE MAURICE E	45	T 5.42	1				1		2000			
13	TA1	548916	2 61		OKEEFE MAURICE E	67	T 2.00										
14	NI		12 69		OSBORNE DEAN	46				1 T 299							
15	2	132004	12 33	DE W	OSNICK GEORGE M	31	T 2.35	1				1		1000			
16	AH	198862	7 47		OSNICK GEORGE M	44	T 9.00										
17	2	45575	7 33		PETRYLAK JOHN H	34	T 5.73	1				1		3000			
18	3	5767	7 32		PFEIFER JOSEPH A	29	T	1				1		2000			FULLY PAID
19	NI		11 65		REYNAR JOHN J	58				1 T 299							Pr - 49
20	2	111330	3 40	DE W	REYNOLDS RUAL L	39	T 5.68	1				1		2000			
21	TA1	592376	8 65	P	ROSS CLAUDE M	61	T 2.16	1									
22	4	20451	11 34	DE W	ROWLAND JOSEPH F	30	T 2.51	1		1 T 299				1000			Pr - 49
23	2	208919	6 39		ROZELLE GUY	43	T 2.52	1				1		1000			
24	AH	168774	3 46		SCARPETTE JOSEPH A	25	T 6.70	1				1					
25	2	141274	11 63		SCARPETTA VINCENT J	66	T 16.44					1		2000			
26	2	80486	10 36		SERONA PHILIP	45	T 2.71	1				1		1000			
27	HS3	423610	3 51		SERONA PHILIP	59	T 3.80										
28	NI		12 43		SHOLLOCK ALEXANDER E	43						1					
29	NI		4 56		SPALL EDWARD A	49				1 T 299							
30	AC1	569615	3 63		STEFANIDES ALEXANDER	66	T 2.70	1				1					
31	NI		4 65		TALARICO CLEMENT A	46				1 T 299							
32	2	124088	2 61	A	THOMAS ARTHUR	43	T 4.17	1		1 T 299				1000			
33	NI		4 67		THOMAS JOHN L	45				1 T 299							Pr - 49
34	AH	585365	9 64	P	TIERNEY JAMES F	55	T 9.72	1	.25	1 T 299							
35	NI		4 41		UPDYKE ELMER	41						1 B					
36	2	12832	7 32		USHER THOMAS	40	T 4.56	1				1		2000			
37	6	129945	8 61	A	VARRATO JOSEPH F	49	T 11.10	1	.25	1 T 299				1500			
38	TA1	592157	8 65	P	VARRATO JOSEPH F	53	T 2.16										
39	J 5	511	12 65	D P	VARRATO THOMAS A	7	T 4.83					J		1000			
40	NI		7 47		WADE EDWARD A	29				1 T 299							
41	2	110009	10 38		WALL GLENN H	48	T 6.08	1				1		2000			
42	2	216745	9 39		WALSH CHARLES F	40	T 2.28	1				1		1000			
43	2	50967	3 57		WALSH CHARLES F	57	T 5.46							1000			
44	2	786385	4 50	D	WALSH CHARLES F	50	T 3.96							1000			
45	3	12373	4 34		WALSH GEORGE T	40	T	1				1		1000			FULLY PAID

FORM 99-100M-7/69															UNITED TRANSPORTATION UNION TREASURER'S BILLING															PAGE 4			STATE PA.			MONTH JUN 70			LOCAL 261		
PLAN	NUMBER	EFF. DATE		CODE	NAME	RAILROAD	AGE	# ASSESSMENT OR PREMIUM	T. B.	T. P. E. L.	INT'L DUES & LEG-S	G. C. A.	EX. MBR.	SECT.	AMOUNT	REMARKS																									
2	445198	4	43		WARD EDWARD C		41	T 2.46	1				1		1000	1																									
2	26968	11	32		WASLEY SAMUEL		45	T 5.42		.25			1		2000	2																									
NI		5	70		WAYMAN DENNIS P		28						1 T 299			3	NEW APPROVAL																								
NI		7	66		WITTS LEWIS T		40						1 T 299			4																									
NI		3	65		ZAVACKY ANDREW		56						1 T 299			5	R-49																								
NI		6	42		NELSON HENRY F JR		30						1			6																									
	224.80AT			290.45LT	6TPEL			515.25	72	1.50	39				107310	7	* TOTALS 64EX																								
	AE			LE												8																									
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5. Track Maintenance



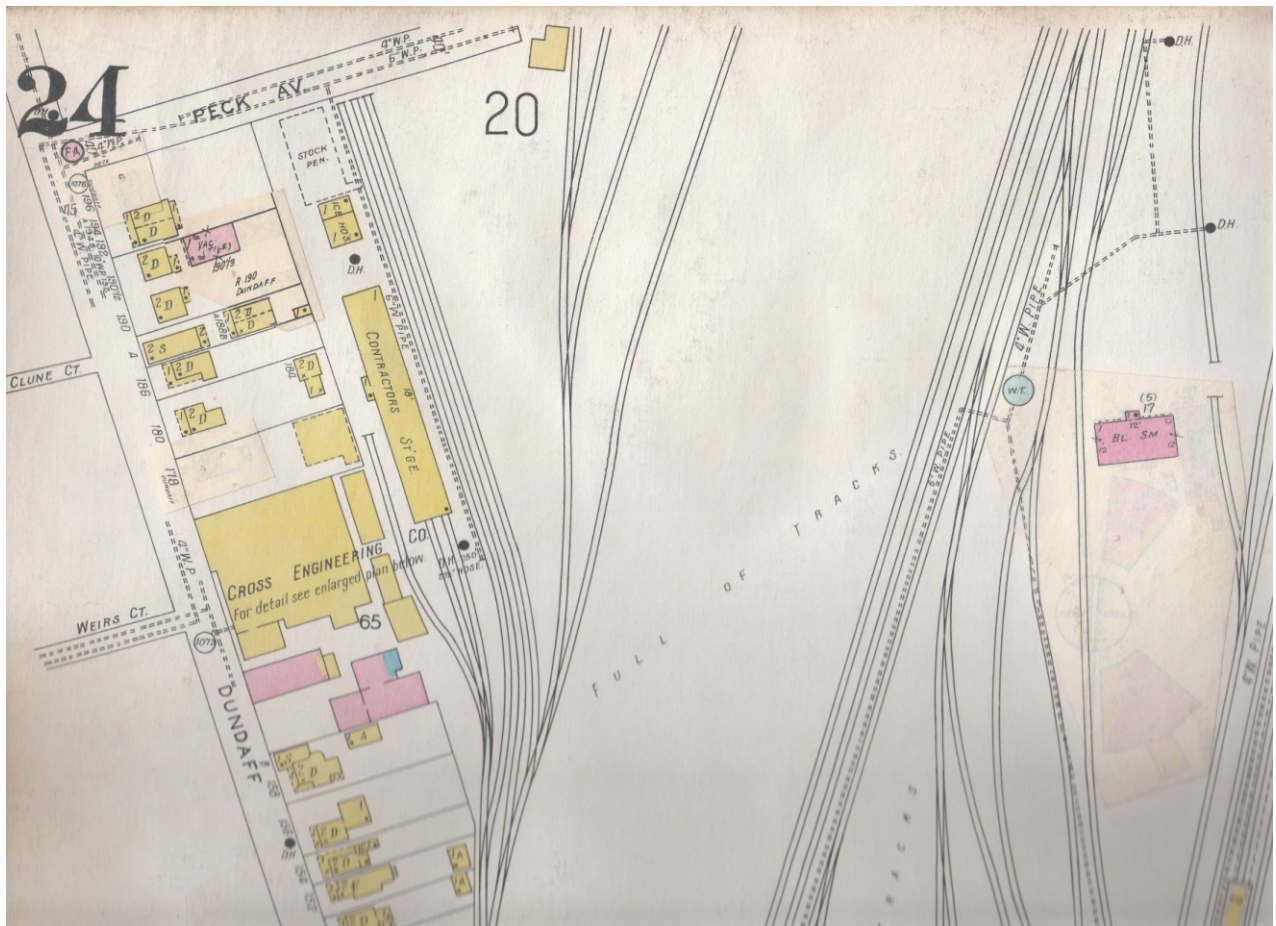
This photograph was published in the *Nostalgia* section of a local newspaper on January 4, 1979. The caption reads as follows: D&H PRIZE SECTION first row, from left are Thomas Pascoe; Frank 'Daddie' Tancredo, assistant foreman; John Rickie. Standing in rear are, from left, D. Ciccio; N. Dominic; J. Levito; A. Terk; A. Neutts, foreman. Photograph was taken in 1927 at Seventh Avenue tool house. Photo courtesy of Frank 'Daddie' Trancredo.

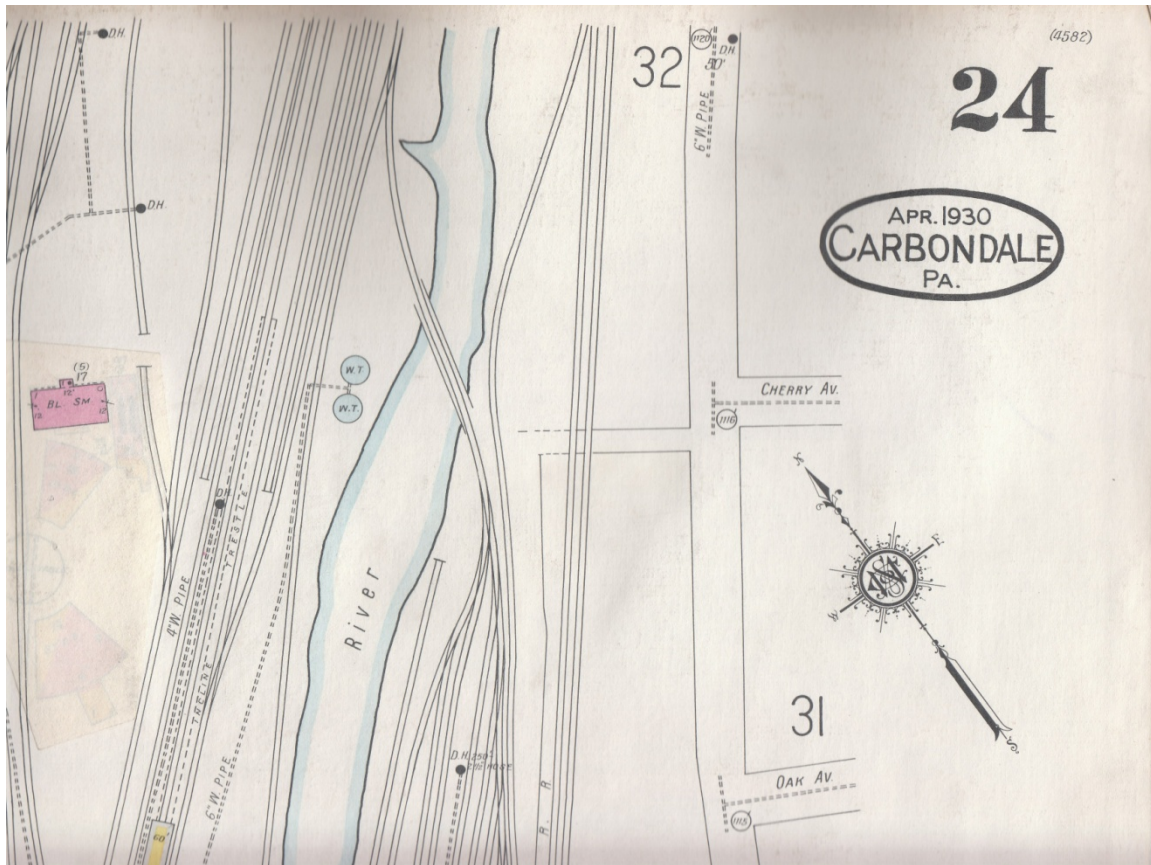
John Buberniak: "The "Division Prize Section" is an award for the best maintained section of track for that part of the division, it was a pride thing that each section strove for. It's from a bygone era when men were proud of their work, and it showed."

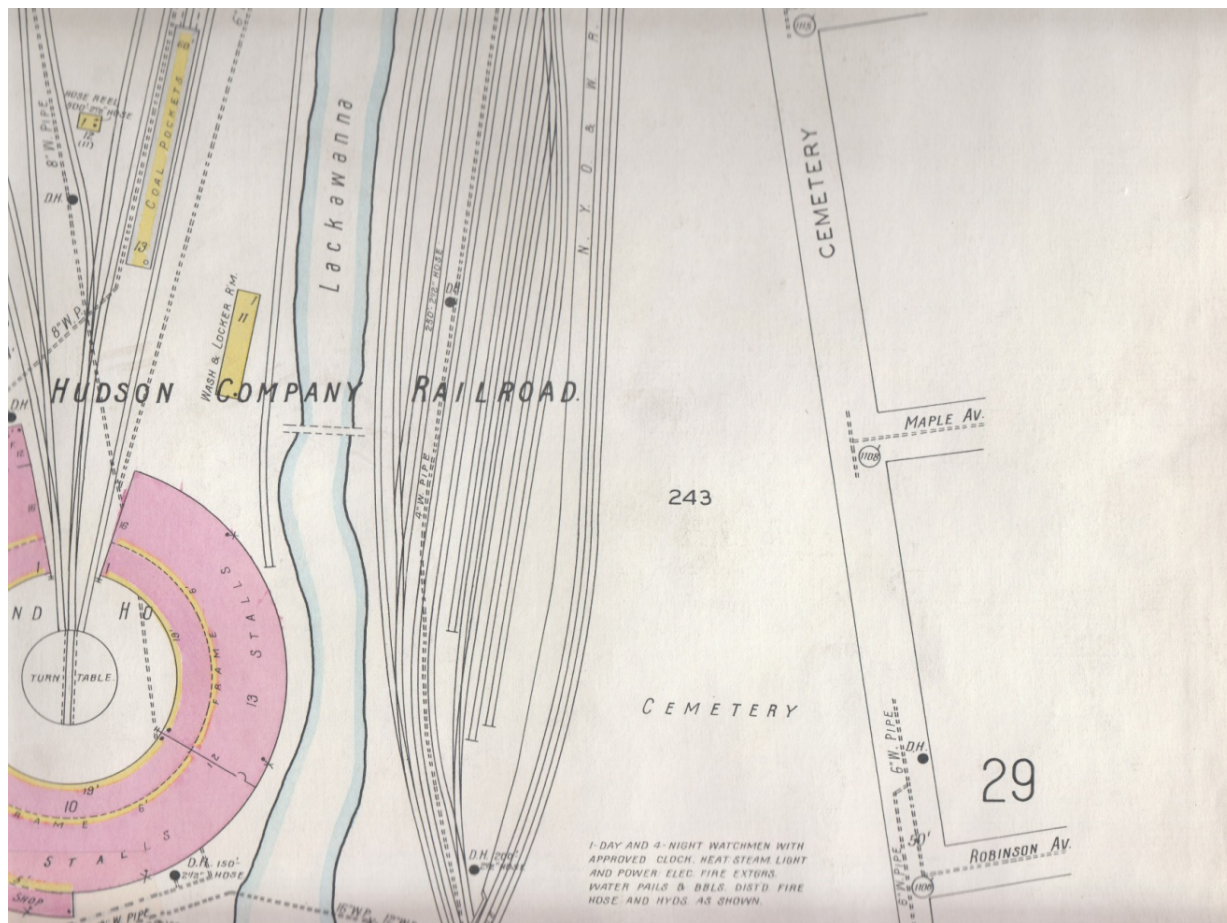


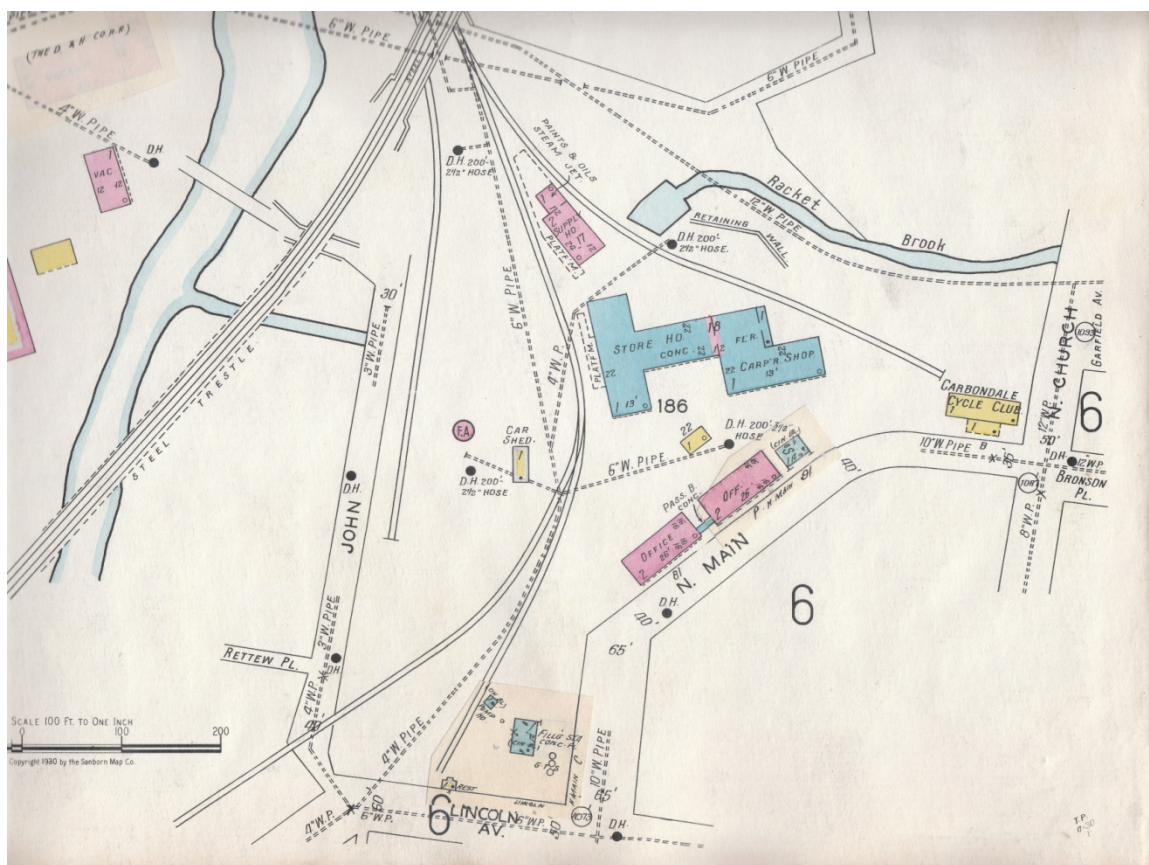
This photo was published in the *Nostalgia* section of a local newspaper on January 4, 1979. The caption there reads: **“GANDY/GANG of D&H**, First row, from left are Frank ‘Daddie’ Tancredo, assistant foreman; Anthony Neutts, foreman; Clarence Adams. Back row, same order, are Frank Russo, assistant foreman; Louis Molinaro, Thomas Pascoe, and Louis Norella. Photograph was taken in 928. Photo courtesy of Frank ‘Daddie’ Tancredo.

6. Shown below are six scans of page 24 of the April 1930 map of the Carbondale Rail Yard from the Sanborn Map Co. map of *Carbondale Simpson and Whites Crossing Lackawanna County Pennsylvania*.









On the cover page of this map book there are some very interesting statistics about the water facilities of the Carbondale area.

Given the importance of water to the successful operation of both gravity and steam railroads and to anthracite mining, those statistics on Carbondale water facilities are highly relevant in the present study. Here are those statistics:

"WATER FACILITIES / Gravity system of water works, owned and operated by the Scranton Spring Brook Water Service Co. Water supply for east side of Carbondale from Racket [should read "Racket"] Brook. Water shed of 3.63 square miles flowing into Brownell Reservoir, 1 3/4 miles east of City Hall, capacity 846,000,000 gallons, elevation 531' above City Hall, also to storage reservoir No. 4, capacity 264,000,000 gallons, elevation 689' above City Hall. / Two 16" and one 14" mains from Brownell Reservoir to the high and low parts of east side with reducer for low section. West side supplied by Fall Brook with water shed of 11.2 square miles flowing into Fall Brook Reservoir, capacity 8,000,000 gallons, located 2 1/2 miles northwest of and 340' above City Hall; also Crystal Lake for storage, drawing top 3', capacity 190,000,000 gallons. 16" and 14" mains to west side. Both systems connected. / Panther Creek Reservoir, capacity 200,000 gallons, located 3 3/4 miles northeast and 671' above City Hall. 4" main from reservoir supplies small section of Simpson and is connected with main supply. / 67 miles of water mains, 2" to 24" diameter, 164 hydrants on system. Pressure 100 lbs. to 120 lbs. in business section. Average daily consumption 6,500,000 gallons."

There are many direct references in the present study to Racket Brook, No. 4 Reservoir, and Panther Creek. No. 4 Reservoir was established by the D&H to provide a source of water for the stationary steam engine at Plane No. 4. Water from many different sources on the top of the Moosic Mountain, the attentive reader will recall, was used by the D&H in many ways in the period 1829-1952.

Additions for Volume XV:

1. In 1951, the City of Carbondale celebrated the centennial of the incorporation of the City on March 15, 1851 with a week-long celebration, featuring several street parades, all with a wide variety of floats. In the photograph shown here, we see a D&H steam locomotive pulling a Gravity Railroad passenger coach down Main Street.



D&H Steam Engine and Gravity Railroad Passenger Coach in 1951 Carbondale Centennial Parade. Photograph in the collection of the Carbondale Historical Society.

2. Twenty-seven photographs of D&H engines in the photograph archives of the Carbondale D&H Transportation Museum:

No. 100



D&H No. 100, Colonie, March 2, 1947. Written on the back of this photograph is “Colonie 3-2-1947”; stamped on the back of this photograph is “J. R. Quinn / Railroad Photographer / P.O. Box 65 / Worcester, N. Y. 12197”

No. 306



D&H No. 306. Site of photograph not yet known.

No. 312



D&H No. 312. Site of photograph not yet known. Possibly north end of Carbondale yard.

No. 446



D&H No. 446. Site of this photograph not yet known.

No. 446



D&H No. 446. Site of this photograph not yet known.

No. 500



D&H No. 500, Carbondale, PA, 1946. Written on the back of this photograph is "C'DALE 1946" Stamped on the back of this photograph is "J. R. Quinn / Railroad Photographer / P.O. Box 65 / Worcester, N. Y. 12197" This is the Scranton/Carbondale passenger train, heading north, by Duffy's Field in Carbondale Township, on its way into downtown Carbondale.

No. 536



D&H No. 536. Site of photograph not yet known.

No. 556



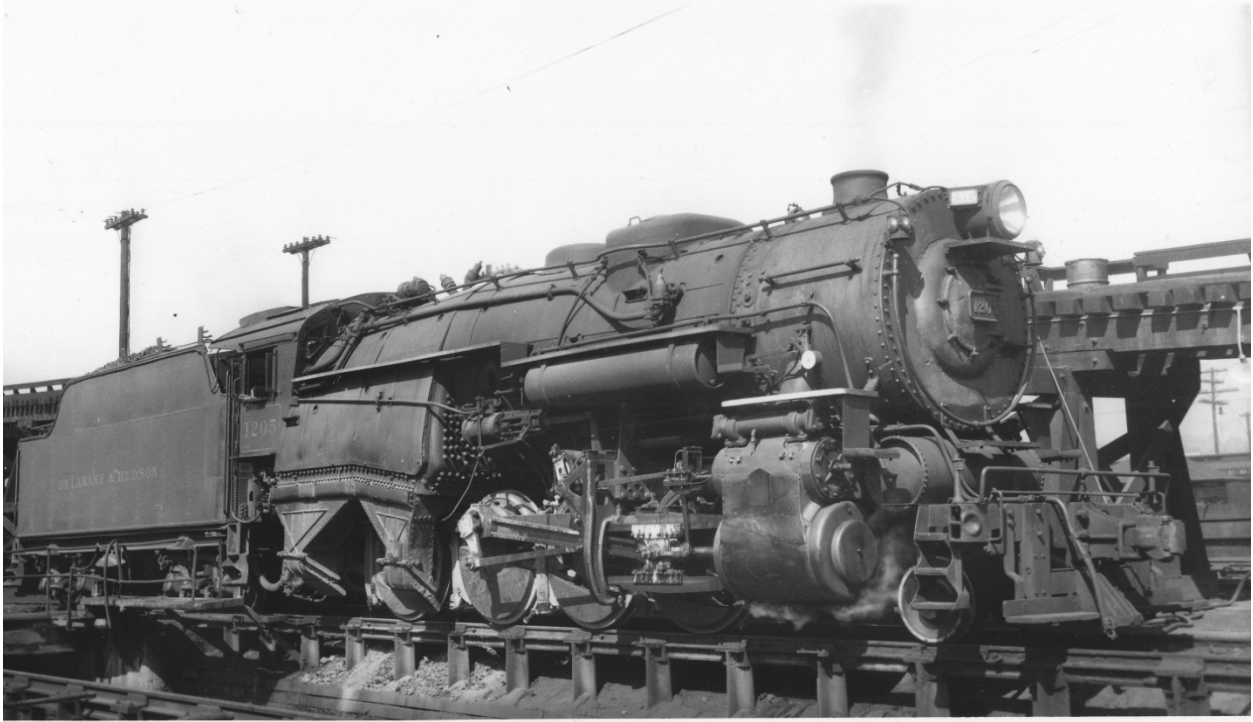
D&H No. 556. Site of photograph not yet known.

No. 803



D&H No. 803. Site of photograph not yet known.

No. 1205



D&H No. 1205, Carbondale, PA, May 30, 1949. Written on the back of this photograph is the following "C'DALE 5-30-1949"

No. 1216



D&H No. 1216. Site of photograph not yet known. Written on the back of this photograph is "C. Alexis"

No. 1506



D&H No. 1 506. Site of photograph not yet known.

No. 1525



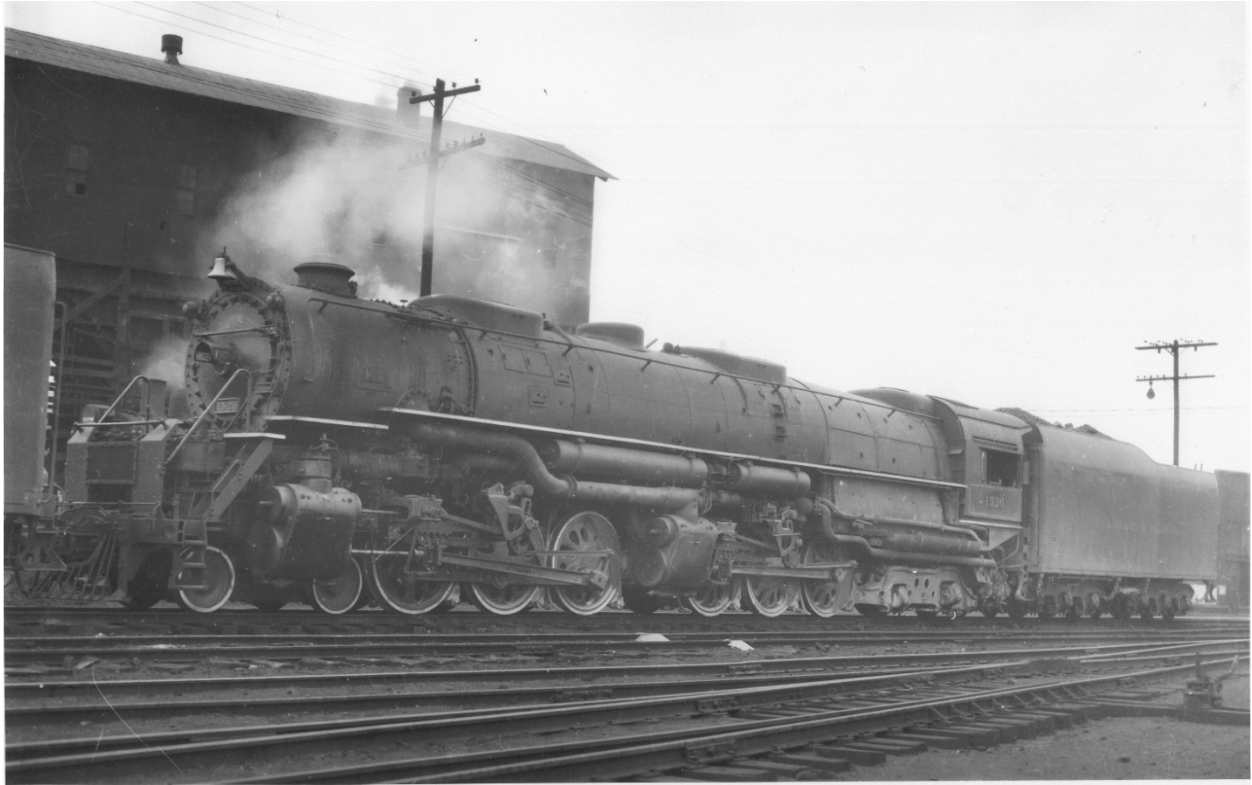
D&H No. 1525, Simpson, PA, March 19, 1950. Written on the back of this photograph is the following: "D&H #1525 NYO&W 807 & D&H 1203 / Lead D&H 1534 "WM-3" Simpson PA 3/19/50 101 cars – Bob Collins"

No. 1525



D&H No. 1525 at Ararat, PA, March 19, 1950. Written on the back of this photograph is the following: "D&H #1525 4-6-6-4 / Ararat, PA. 3/19/50 / Pushers on W0-X / O&W 807 / Bob Collins"

No. 1526



D&H No. 1526 in Carbondale, May 31, 1945. Written on the back of this photograph is “CDLE 5-31-45”; stamped on the back of this photograph is “J. R. Quinn / Railroad Photographer / P.O. Box 65 / Worcester, N. Y. 12197”

No. 1528



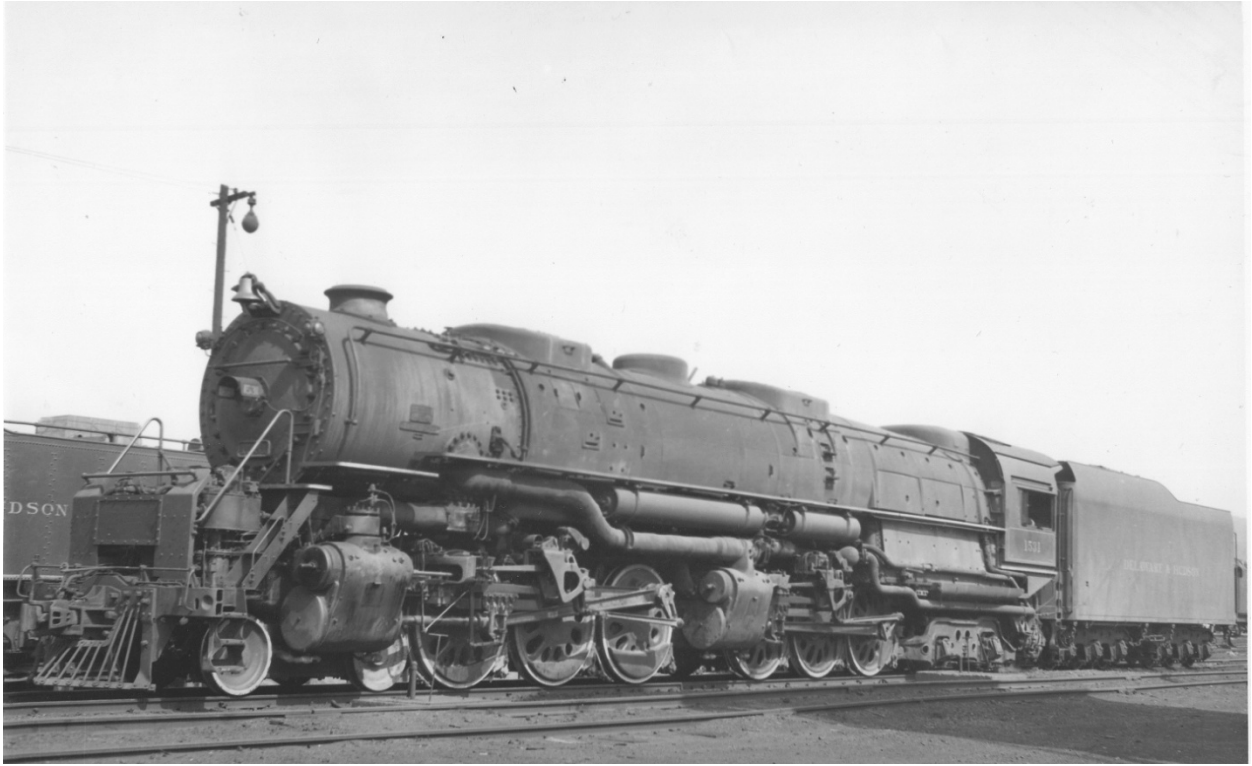
D&H No. 1528 in Carbondale, September 4, 1949. Written on the back of this photograph is “C’DLE 9-4-49”; stamped on the back of this photograph is “J. R. Quinn / Railroad Photographer / P.O. Box 65 / Worcester, N. Y. 12197”

No. 1530



D&H No. 1530, September 9, 1951. Written on the back of this photograph is "C'DLE ? 9-9-51"; stamped on the back of this photograph is "J. R. Quinn / Railroad Photographer / P.O. Box 65 / Worcester, N. Y. 12197"

No. 1531



D&H No. 1531, Carbondale, September 6, 1947. Written on the back of this photograph is "CDALE 9-6-47"

No. 1532



D&H No. 1532, Carbondale, PA, September 6, 1947. Written on the back of this photograph is "J R QUINN C'dale 9-6-47"

No. 1533



D&H No. 1533, Carbondale, PA, September 6, 1947. Written on the back of this photograph is "C"DALE 9-6-47"; stamped on the back of this photograph is "J. R. Quinn / Railroad Photographer / P.O. Box 65 / Worcester, N. Y. 12197"

No. 1536



D&H No. 1536, Carbondale, PA April 9, 1949. Stamped on the back of this photograph is "J. R. Quinn / Railroad Photographer / P.O. Box 65 / Worcester, N. Y. 12197"

No. 1600



D&H No. 1600, Carbondale, PA, October 3, 1948. On a label attached to the back of this photograph is the following: "D&H 0-8-8-0 at Carbondale, PA 10/3/48"; stamped on the back of this photograph is the following: "DISTRIBUTED BY / RAILROAD AVENUE ENTERPRISES / P. O. BOX 114 / FLANDERS, N. J. 07836 / ALL RIGHTS RESERVED / NEG. # PN-6745"

No. 1601



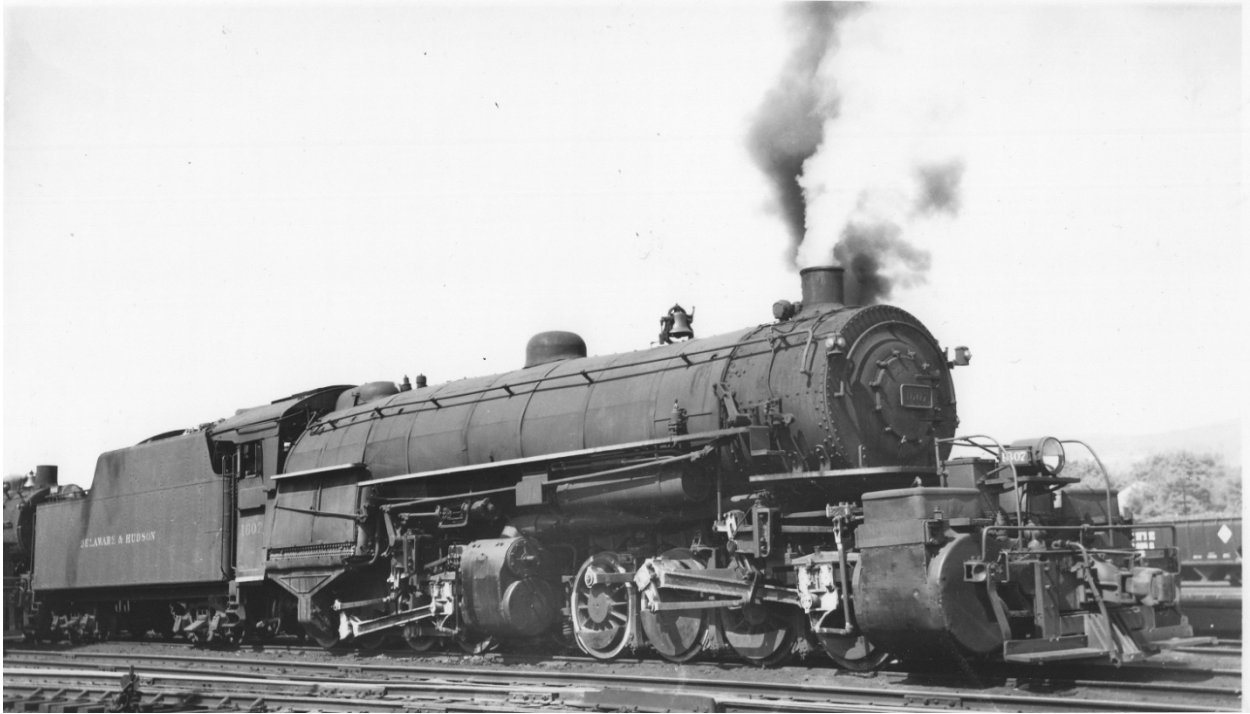
D&H No. 1601, Carbondale, PA, June 9, 1947. Written on the back of this photograph is "C'DALE 6 9 47"

No. 1605



D&H No. 1605, Carbondale, PA, September 14, 1947. Written on the back of this photograph is the following "C'DALE 9-14-47"

No. 1607



*D&H No. 1607, Carbondale, PA, 1947. Written on the back of this photograph is the following
"J R QUINN / C'DLE '47"*

3. Wilkes-Barre Roundhouse. *BLHS Bulletin*, January 2017, p. 13, where it is captioned: "D&H record book photo, June 23, 1916, ID# A-1/1A V7. Engine house (with engines), looking west; location Sta. 18+40. Possibly near Buttonwood Yard, since Buttonwood Yard, the D&H-PRR transfer yard, was at Sta. 48. D&H photo, BLHS Archives."



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